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Set	Items	Description
S1	84224	(VIBRAT? OR SHOCK OR SEISMIC) (3N) (ABSORPTION OR ABSORB??? - OR DAMP? OR RESIST? OR CUSHION)
S2	57220	(ELECTRONIC() (DEVICE?? OR UNIT?? OR SYSTEM?? OR APPARATUS) OR (CD OR DVD OR (DIGITAL()VERSATILE OR COMPACT)())DISC?? OR D-ISK??)) (()) (PLAYER?? OR UNITS OR SYSTEM??)
S3	606073	RESIN?? OR POLYETHYLENE
S4	2668506	BUCKLE?? OR BUCKLING OR BEND??? OR MOMENT OR TOURQUE OR C-OMPRESS? OR DEFORM?
S5	157	AU=(KUWAJIMA, H? OR KUWAJIMA H?)
S6	68	S1(S)S2
S7	52	RD (unique items)
S8	1	S7(S)S3
S9	2	S7(S)S4
S10	2	S9 NOT S8
S11	1	S10 NOT MOTORCYCLE
S12	0	S7 AND S5
S13	47	S7 NOT PY>2003
S14	3	S13 AND (S3 OR S4)
S15	0	S14 NOT (S8:S11)
S16	0	S13 AND ((VERTICAL OR ORTHOGONAL) (3N) FORCE??)
S17	0	S13 (3N) (CASE?? OR CASING OR CARTRIDGE?? OR HOUSING)

8/3,K/1 (Item 1 from file: 8)
DIALOG(R)File 8:EI Compendex(R)
(c) 2006 Elsevier Eng. Info. Inc. All rts. reserv.

00419785 E.I. Monthly No: EI7412080976
Title: UNIQUE SILICONE MATERIALS AND TECHNIQUES FOR MICRO AND MACRO ELECTRONIC PACKAGING.

Author: Smith, Schuyler B.
Corporate Source: Dow Corning Corp, Midland, Mich
Source: SAMPE Natl Symp and Exhib, 19th, Pap, Buena Park, Calif, Apr 23-25 1974 p 686-692. Publ by SAMPE Natl Bus Off (Vol 19), Azusa, Calif, 1974

Publication Year: 1974

Language: ENGLISH

...Abstract: silicone technology that have resulted in new and improved products for use in packaging airborne **electronic systems**. These products include gelatinous membranes for I. C. packaging, thermally conductive noncorrosive cements for power devices, conformal coatings for printed circuit arrays, flame retardant impregnants, and embedding compounds, **vibration damping** materials, optical bonding **resins** and controlled volatility sealants.

11/3,K/1 (Item 1 from file: 8)

DIALOG(R)File 8:EI Compendex(R)

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02054022 E.I. Monthly No: EI8612117638 E.I. Yearly No: EI86006990

Title: **CALCULATED CHEMISORPTION PROPERTIES OF ATOMS AND DIPOLES.**

Author: Holmstroem, Stefan

Corporate Source: Chalmers Univ of Technology, Goteborg, Swed

Source: Chalmers Tekniska Hogskola, Doktorsavhandlingar n 561 1986 37p

Publication Year: 1986

CODEN: DCTHAT ISSN: 0366-8746

Language: ENGLISH

...Abstract: method that self-consistently solves the Kohn-Sham equations for a localized perturbation in an **electronic system**. The metallic substrate is modelled by a semi-infinite jellium, and results are obtained for potential energy, induced dipole **moment**, density of states and, in the case of a chemisorbed dipole, **vibrational damping** of the internal stretch mode. (Edited author abstract) 81 refs.

13/3,K/1 (Item 1 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2006 Institution of Electrical Engineers. All rts. reserv.

08838258 INSPEC Abstract Number: C2004-02-3360B-045

Title: **A magneto-rheological fluid shock absorber for an off-road motorcycle**

Author(s): Ericksen, E.O.; Gordaninejad, F.

Author Affiliation: Dept. of Mech. Eng., Nevada Univ., Reno, NV, USA

Journal: International Journal of Vehicle Design vol.33, no.1-3 p. 139-52

Publisher: Inderscience Enterprises,

Publication Date: 2003 Country of Publication: Switzerland

CODEN: IJVDDW ISSN: 0143-3369

SICI: 0143-3369(2003)33:1/3L:139:MRFS;1-7

Material Identity Number: P806-2003-006

U.S. Copyright Clearance Center Code: 0143-3369/03/\$10.00+.50

Language: English

Subfile: C

Copyright 2004, IEE

...Abstract: theoretical and experimental investigations of a controllable, semi-active, fail-safe, magneto-rheological fluid (MRF) **shock absorber** for the rear suspension of an off-road motorcycle. A fail-safe MRF damper refers...

...that retains a minimum required damping capacity in the event of a power supply or **electronic system** failure. A theoretical fluid

mechanics-based model is developed to predict the controllable damping force...

... this proof-of-concept study is a retrofit of a Honda XR 400 enduro motorcycle **shock absorber**. The MRF **dampers** emulate the original equipment manufacturer **shock absorber** performance in its passive off mode (i.e., no applied magnetic field) and provides controllable...

13/3,K/2 (Item 2 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2006 Institution of Electrical Engineers. All rts. reserv.

08838257 INSPEC Abstract Number: C2004-02-3360B-044

Title: Semi-active, fail-safe magneto-rheological fluid dampers for mountain bicycles

Author(s): Breese, D.G.; Gordaninejad, F.

Author Affiliation: Dept. of Mechanical Eng., Nevada Univ., Reno, NV, USA

Journal: International Journal of Vehicle Design vol.33, no.1-3 p. 128-38

Publisher: Inderscience Enterprises,

Publication Date: 2003 Country of Publication: Switzerland

CODEN: IJVDDW ISSN: 0143-3369

SICI: 0143-3369(2003)33:1/3L:128:SAFS;1-A

Material Identity Number: P806-2003-006

U.S. Copyright Clearance Center Code: 0143-3369/03/\$10.00+.50

Language: English

Subfile: C

Copyright 2004, IEE

...Abstract: that retains a minimum required damping capacity in the event of a power supply or **electronic system** failures. Two new MRF dampers are designed and tested with the intent of being used...

... The MRF dampers are designed to emulate the performance of the original equipment manufacturer (OEM) **shock absorbers** in the passive off mode (i.e., no magnetic field). Procedures and results are presented...

13/3,K/3 (Item 3 from file: 2)

DIALOG(R)File 2:INSPEC

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08826172 INSPEC Abstract Number: B2004-02-7630A-002, C2004-02-3360L-042

Title: Aerospace electronics weight reduction through the use of active mass damping

Author(s): Esser, B.; Huston, D.R.; Miller, J.

Author Affiliation: Mech. Eng. Dept., Vermont Univ., Burlington, VT, USA

Journal: Proceedings of the SPIE - The International Society for Optical Engineering Conference Title: Proc. SPIE - Int. Soc. Opt. Eng. (USA) vol.5052 p.433-44

Publisher: SPIE-Int. Soc. Opt. Eng,

Publication Date: 2003 Country of Publication: USA

CODEN: PSISDG ISSN: 0277-786X

SICI: 0277-786X(2003)5052L:433:AEWR;1-8

Material Identity Number: C574-2003-262

U.S. Copyright Clearance Center Code: 0277-786X/03/\$15.00

Conference Title: Smart Structures and Materials 2003. Damping and Isolation

Conference Sponsor: SPIE; ASME; Soc. Experimental Mechanics; Boeing Co.; Rhombus Consultants Group; et al

Conference Date: 3-5 March 2003 Conference Location: San Diego, CA, USA

Language: English

Subfile: B C
Copyright 2004, IEE

...Abstract: vibration and their associated stresses and strains in such applications add significant weight to these **electronic systems**. The vibration protection they provide is crucial, however, as the nature of aerospace vehicles requires...

... maintaining equal or superior vibration protection. This paper presents results of electronic circuit board active **vibration** reduction of **damping** sinusoidal excitations near resonance, free **vibration damping**, as well as future strategies for the active vibration control system.

13/3,K/4 (Item 4 from file: 2)
DIALOG(R)File 2:INSPEC
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08576530 INSPEC Abstract Number: B2003-05-6250-025
Title: **Bluetooth wireless network communications technologies to meet environmental requirements in motor vehicles**
Author(s): Pohlmann, G.
Journal: Elektronik Praxis no.21 p.180-4
Publisher: Vogel-Verlag,
Publication Date: 5 Nov. 2002 Country of Publication: Germany
CODEN: EKPXAM ISSN: 0341-5589
SICI: 0341-5589(20021105)21L:180:BWNC;1-M
Material Identity Number: E248-2002-022
Language: German
Subfile: B
Copyright 2003, IEE

...Abstract: linking for motor vehicle applications. Diagnosis and maintenance problems are examined, and interference with other **electronic systems** is considered. Bluetooth range is stated as 10 to 15 metres, when output power is...

... lists for transport vehicles is considered. Problems of temperature dependence are stated The need for **vibration** and **shock resistance**, and for operation between -40 deg C and +85 deg C is emphasised. Examines interference...

13/3,K/5 (Item 5 from file: 2)
DIALOG(R)File 2:INSPEC
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07915789 INSPEC Abstract Number: B2001-06-3120B-038
Title: **A study of shock-resistance design of suspension subjected to impulsive excitation**
Author(s): Sung Jin Lee; Soon Kyo Hong; Jang Moo Lee
Author Affiliation: Opto-Mechatronics Lab., Samsung Electron. Co., South Korea
Journal: IEEE Transactions on Magnetics Conference Title: IEEE Trans. Magn. (USA) vol.37, no.2, pt.1 p.826-30
Publisher: IEEE,
Publication Date: March 2001 Country of Publication: USA
CODEN: IEMGAQ ISSN: 0018-9464
SICI: 0018-9464(200103)37:2:1L:826:SSRD;1-1
Material Identity Number: I101-2001-007
U.S. Copyright Clearance Center Code: 0018-9464/2001/\$10.00
Conference Title: 2000 Asia-Pacific Magnetic Recording Conference. Digest of APMRC2000

Conference Sponsor: IEEE Magnetics Soc.; IEEE Magnetics Soc. Japan Chapter; Storage Res. Consortium, Japan; ASME; Int. Disk Drive Equipment Mater. Assoc. Japan (IDEMA Japan); Inst. Electr. Eng. Japan; Sensor & Micromachine Div.; Japan Soc. Tribologists (JAST); Japan Soc. Mech. Eng. (JSME); Japan Soc. Precision Eng. (JSPE); Magnetic Soc. Japan (MSJ)

Conference Date: 6-8 Nov. 2000 Conference Location: Tokyo, Japan

Language: English

Subfile: B

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...Abstract: of this analytical model is to try to quantitatively describe the dynamics of the head/ **disk system**. The results are in good agreement with those of FE simulations and experiments. It is...

... study of suspension design is made to find out the optimal value for increasing the **shock resistance** of a disk drive.

13/3,K/6 (Item 6 from file: 2)

DIALOG(R)File 2:INSPEC

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06251211 INSPEC Abstract Number: B9606-0170C-006, C9606-3260-005

Title: **Modeling and design methodology for mechatronic systems**

Author(s): Isermann, R.

Author Affiliation: Inst. of Autom. Control, Tech. Univ. Darmstadt, Germany

Journal: IEEE/ASME Transactions on Mechatronics vol.1, no.1 p.16-28

Publisher: IEEE,

Publication Date: March 1996 Country of Publication: USA

CODEN: IATEFW ISSN: 1083-4435

SICI: 1083-4435(199603)1:1L.16:MDMM;1-N

Material Identity Number: D486-96001

U.S. Copyright Clearance Center Code: 1083-4435/96/\$05.00

Language: English

Subfile: B C

Copyright 1996, IEE

...Abstract: functions. After discussing the mutual interrelations between the design of the mechanical system and digital **electronic system** the different ways of integration within mechatronic systems and the resulting properties are described. The...

... examples of applications are given, like adaptive control of electromagnetic and pneumatic actuators, adaptive semiactive **shock absorbers** for vehicle suspension, and electronic drive-chain damping.

13/3,K/7 (Item 7 from file: 2)

DIALOG(R)File 2:INSPEC

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05045674 INSPEC Abstract Number: B9201-0170J-036

Title: **Performance of new silicone adhesives and encapsulants at high and low temperatures**

Author(s): Mollie, J.-P.; Paquet, R.L.

Conference Title: Eighth International Conference on Automotive Electronics (Conf. Publ. No.346) p.174-7

Publisher: IEE, London, UK

Publication Date: 1991 Country of Publication: UK xii+218 pp.

ISBN: 0 85296 525 7

Conference Date: 28-31 Oct. 1991 Conference Location: London, UK

Language: English

Subfile: B

...Abstract: from construction to aerospace. Silicones are very successful in providing the environmental protection of car **electronic systems**. Automotive electronics are exposed to hazards that most electronic components never encounter, including high humidity...

... ideally suited for use in such demanding situations: they can be soft and flexible for **vibration damping**; they are thermally stable from -50 degrees C to +200 degrees C (standard); and silicones...

... insulators. New materials have been specifically designed to meet the increasingly stringent requirements imposed upon **electronic systems** in automotive applications. The authors discuss the characteristics and performance of the silicones.

13/3,K/8 (Item 8 from file: 2)

DIALOG(R)File 2:INSPEC

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04320539 INSPEC Abstract Number: B89021637, C89018361

Title: Hydraulic damping restrained electronically

Author(s): Van der Wal, R.P.

Journal: Elektronika vol.36, no.21 p.35, 37, 39, 41-5, 47, 49

Publication Date: 4 Nov. 1988 Country of Publication: Netherlands

CODEN: LKTND0 ISSN: 0033-7854

Language: Dutch

Subfile: B C

Abstract: The author provides an introduction to the use of electronics in controlling **shock absorbers** in e.g. vehicles. He begins by outlining (qualitatively) the physics of oscillating (damped) loads and the design of **shock absorbers** and then looks in detail at **electronic systems**, their programs, safety and requirements. Finally he examines central control units, operating units and servo...

13/3,K/9 (Item 9 from file: 2)

DIALOG(R)File 2:INSPEC

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04280868 INSPEC Abstract Number: C89009807

Title: Control of fast mechanisms with digital signal processors

Author(s): Hanselmann, H.; Henrichfreise, H.; Hostmann, A.; Schwarte, A.

Journal: Elektronik vol.37, no.19 p.119-29

Publication Date: 16 Sept. 1988 Country of Publication: West Germany

CODEN: EKRKAR ISSN: 0013-5658

Language: German

Subfile: C

...Abstract: controlling fast mechanical movements. A series of applications are quoted such as replacing the conventional **shock absorbers** on motor vehicle wheels with active or semi-active **electronic systems** based on the TMS digital signal processor family; the control of a robot arm to...

13/3,K/10 (Item 10 from file: 2)

DIALOG(R)File 2:INSPEC

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04023061 INSPEC Abstract Number: B88000173

Title: Electronic assemblies for resistance to vibration and shock

Author(s): Markstein, H.W.

Journal: Elettronica Oggi no.47 p.107-8, 110, 112
Publication Date: Sept. 1987 Country of Publication: Italy
CODEN: ELOGDA ISSN: 0391-6391
Language: Italian
Subfile: B

Abstract: Given that most modern **electronic systems** consist of a series of printed circuit boards mounted in a frame, the problem of designing for **resistance to shock and vibration**, as for instance in apparatus for use in aerospace, is mainly that of suitability dimensioning ...

13/3,K/11 (Item 11 from file: 2)
DIALOG(R)File 2:INSPEC
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03836994 INSPEC Abstract Number: B87020788
Title: The Becker-Mexico-auto receiver/CD-player from Germany
Author(s): Muhlethaler, T.
Journal: Sound vol.9, no.11 p.20-2
Publication Date: Nov. 1986 Country of Publication: Switzerland
CODEN: SRTEEM ISSN: 0258-9141
Language: German
Subfile: B

...Abstract: Disc electronic Kurier 860. The unit is furnished with a four-wave-tuner and a **shock - resistant CD - player** -system, which is Japanese-made, and meets most up-to-date requirements. All technical as...

13/3,K/12 (Item 12 from file: 2)
DIALOG(R)File 2:INSPEC
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03768155 INSPEC Abstract Number: B86069968
Title: Progress in the techniques of CD-reproducers
Journal: Funk-Technik vol.41, no.7 p.296-300
Publication Date: July 1986 Country of Publication: West Germany
CODEN: FUTEAW ISSN: 0016-2825
Language: German
Subfile: B

Abstract: Two new **compact disc players** from the German Thomson Brandt organization are described. Both the CD 20 and CD 40...

... a stored focus level memory. Other features are fast search and band access and elaborate **shock - absorbing** precautions.

13/3,K/13 (Item 13 from file: 2)
DIALOG(R)File 2:INSPEC
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01081806 INSPEC Abstract Number: A70001017
Title: Infrared and electronic absorption spectra of quinoline
Author(s): Amma, R.A.; Nair, K.P.R.; Singh, S.N.
Author Affiliation: Banaras Hindu Univ., Varanasi, India
Journal: Indian Journal of Pure and Applied Physics vol.7, no.8 p. 567-9
Publication Date: Aug. 1969 Country of Publication: India
CODEN: IJOPAU ISSN: 0019-5596
Language: English

Subfile: A

...Abstract: observed frequencies have been correlated to the Raman frequencies and assigned to different modes of **vibrations**. The electronic **absorption** spectrum of the molecule in the vapour phase has also been recorded in the region 3150-2600 AA. Two **electronic systems** consisting of discrete bands due to $n-\pi^*$ and $\pi-\pi^*$ transitions have been observed...

13/3,K/14 (Item 14 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2006 Institution of Electrical Engineers. All rts. reserv.

0000843270 INSPEC Abstract Number: 1967A28828

Title: Electronic absorption spectrum of ferrocene

Author(s): Armstrong, A.T.; Smith, F.; Elder, E.; McGlynn, S.P.

Journal: Journal of Chemical Physics 46 11 p.4321-4328

Publication Date: 1 June 1967 Country of Publication: USA

Language: English

Subfile: A

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...Abstract: first-order vibronic stealing from the $\sim 50\,000\text{-cm}^{-1}$ SUP -1 band. The higher-energy **absorption** bands show **vibrational** structure, and this structure is analyzed herein; unfortunately, the resolution is restricted by "molecular" reasons...

... are heavily localised on the aromatic rings in contrast to the three low-energy diffuse **electronic systems** in Regions IV, V, and VI which contain much d-orbital and intramolecular charge-transfer...

13/3,K/15 (Item 1 from file: 6)

DIALOG(R)File 6:NTIS

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2300808 NTIS Accession Number: DE2004-822318/XAB

Downhole Vibration Monitoring and Control System

Cobern, M. E.

APS Technology, Inc., Cromwell, CT.

Corp. Source Codes: 888888888

Sponsor: Department of Energy, Washington, DC.

Feb 2003 one CD-ROM contains 15 page document

Languages: English

Journal Announcement: USGRDR0502

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NTIS Prices: AV A03

...string. It is composed of two main elements. The first is a multi-axis active **vibration damper** to minimize harmful axial, lateral and torsional vibrations, and thereby increase both rate of penetration...

... a drillstring response including the active damper; a top-level design of the mechanical and **electronic systems**; analyzing the anticipated performance of the damper by modeling and laboratory testing of small prototypes...

13/3,K/16 (Item 2 from file: 6)
DIALOG(R)File 6:NTIS
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1952313 NTIS Accession Number: AD-A304 544/0
Joint STARS RTMM Carrying Case
(Final rept. Apr 93-Jan 96)
Tekesky, R. S.
Air Force Packaging Technology and Engineering Facility, Wright-Patterson
AFB, OH.
Corp. Source Codes: 112065000; 430739
Report No.: AFMC-96-R-02
Jan 96 49p
Languages: English
Journal Announcement: GRAI9616
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email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road,
Springfield, VA, 22161, USA.
NTIS Prices: PC A04/MF A01

The **Electronic System** Center (ESC) at Hanscom AFB, MA requested the
Air Force Packaging Technology and Engineering Facility...

... driving factors in the design. The case requirements are to be
waterproof, one person carry, **shock absorbent**, house six RTMM's, and
limited to a maximum weight of 42 pounds. After reviewing...

13/3,K/17 (Item 3 from file: 6)
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1704053 NTIS Accession Number: TIB/A92-03862
**Betriebssicherheit und Einsatzzuverlaessigkeit von Hubwerkskonzepten mit
redundanten Komponenten. (Operational safety and reliability of hoisting
gear concepts with redundant components)**
(Diss)
Leicht, B.
Ruhr Univ., Bochum (Germany, F.R.). Lehrstuhl fuer Maschinenelemente und
Foerdertechnik.
Corp. Source Codes: 004202027;
Sponsor: Bochum Univ. (Germany). Inst. fuer Konstruktionstechnik.
Report No.: ISBN 3-89194-099-8
13 Dec 91 164p
Languages: German Document Type: Thesis
Journal Announcement: GRAI9307
In German. Bochum Universitaet, Institut fuer Konstruktionstechnik.
Schriftenreihe, no. 91/10.
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customers); (703)605-6000 (other countries); fax at (703)321-8547; and
email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road,
Springfield, VA, 22161, USA.
NTIS Prices: PC E14

... device to equalize the load of redundant ropes is tested to prove its
capability of **absorbing** the dynamic **shock** in transferring the load of a
damaged rope to the remanent one. Various **electronic systems** to release
the emergency safety brake are theoretically and experimentally
investigated. The dynamic behaviour of...

13/3,K/18 (Item 4 from file: 6)

DIALOG(R)File 6:NTIS
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1525781 NTIS Accession Number: MIRA-90/77

What Is the Trend in Suspensions

Brambilla, E.

Motor Industry Research Association, Nuneaton (England).

Corp. Source Codes: 076102000

Report No.: MIRA TRANS-2/90

Aug 89 11p

Languages: English Document Type: Translation

Journal Announcement: GRAI9021

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NTIS Prices: PC\$72.00

... and reconcile the two requirements, the technicians have had to 'reinvent' the spring and the **shock absorber**. Pneumatic, hydraulic and **electronic systems** which are already in use today, will later become more widespread. The report describes trends...

13/3,K/19 (Item 5 from file: 6)

DIALOG(R)File 6:NTIS

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0123688 NTIS Accession Number: AD-657 140/XAB

Sandwich Plates Having Dissipative Cores, as Vibration Energy Absorbers

Plass, H. J.

Texas Univ Austin Defense Research Lab

Corp. Source Codes: 107500

Report No.: DRL-385

15 Jul 56 22p

Journal Announcement: USGRDR6720

Prepared in cooperation with Johns Hopkins Univ., Silver Spring, Md. Applied Physics Lab., CF-2542.

Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)321-8547; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A02/MF A01

... is mounted. It is desirable to keep the amplitude of these vibrations in the sensitive **electronic units** as low as possible. To accomplish this, **vibration absorbers** may be incorporated between the frame of the missile and the equipment deck, or the deck itself may be constructed so that it acts as a continuous **vibration absorber**. Such a deck may be made in the form of a sandwich plate, that is...

13/3,K/20 (Item 1 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

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06014948 E.I. No: EIP02096876964

Title: Study of shock-resistance design of suspension subjected to impulsive excitation

Author: Lee, Sung Jin; Hong, Soon Kyo; Lee, Jang Moo

Corporate Source: Opto-Mechatronics Laboratory Corporate R and D Center Samsung Electronics Co., Suwon, South Korea

Source: IEEE Transactions on Magnetics v 37 n 2 I March 2001. p 826-830

Publication Year: 2001
CODEN: IEMGAQ ISSN: 0018-9464
Language: English

...Abstract: of this analytical model is to try to quantitatively describe the dynamics of the head/ **disk system** . The results are in good agreement with those of FE simulations and experiments. It is...

...study of suspension design is made to find out the optimal value for increasing the **shock resistance** of a disk drive. 8 Refs.

13/3,K/21 (Item 2 from file: 8)
DIALOG(R)File 8: Ei Compendex(R)
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04753848 E.I. No: EIP97073738298

Title: **Investigation on the vibration resistance of optical head in the optical disk**

Author: Huang, Ying; Ruan, Yu
Corporate Source: Huazhong Univ of Science and Technology, Wuhan, China
Source: Guangdian Gongcheng/Opto-Electronic Engineering v 24 n 1 Feb 1997. p 31-35
Publication Year: 1997
CODEN: GUGOEC ISSN: 1003-501X
Language: Chinese

...Abstract: range of 5-2,000Hz was designed for it. The experimental results on the optical- **disk system** equipped with the miniature vibration-isolating system show that (1) the **vibration - resistance** performance of the optical disk can reach up to 3.5g; (2) the shock-proof ...

13/3,K/22 (Item 3 from file: 8)
DIALOG(R)File 8: Ei Compendex(R)
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04746407 E.I. No: EIP97073728051

Title: **Patent and inventorship issues over the last thirty years of optical storage technology**

Author: Gregg, David Paul
Corporate Source: Eclectic Associates, Culver City, CA, USA
Conference Title: Proceedings of the 1997 Optical Data Storage Topical Meeting, ODS
Conference Location: Tucson, AZ, USA Conference Date: 19970407-19970409
E.I. Conference No.: 46597
Source: Topical Meeting on Optical Data Storage - Digest of Technical Papers 1997. Optical Soc of America, Washington, DC, USA, 97TH8273. p 7-8
Publication Year: 1997
CODEN: TMOSEF
Language: English

...Abstract: for recordable disks with error-reducing signal processing. And in 1993, one patent on a **shock - resistant disk - player** combination. Since 1989, effort has been shifted from the optical disk to fast-access optical...

13/3,K/23 (Item 4 from file: 8)
DIALOG(R)File 8: Ei Compendex(R)
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03787298 E.I. No: EIP94011180788

Title: Determination of temperature and no concentrations through the dark zone of solid-propellant flames

Author: Vanderhoff, J.A.; Teague, M.W.; Kotlar, A.J.

Corporate Source: US Army Ballistic Research Lab, Aberdeen Proving Ground, MD, USA

Conference Title: Proceedings of the 24th International Symposium On Combustion

Conference Location: Sydney, Aust Conference Date: 19920705-19920710

E.I. Conference No.: 19626

Source: Symposium (International) on Combustion 1992. Publ by Combustion Inst, Pittsburg, PA, USA. p 1915-1922

Publication Year: 1992

CODEN: SYMCAQ ISSN: 0082-0784

Language: English

...Abstract: spectrometer-intensified photodiode-array detectors formed the basic experimental setup from which NO and OH **absorption** spectra were acquired. **Vibrationally** resolved transitions in the A**2 Sigma - X**2 Pi **electronic system** of NO from 230 to 250 nm comprise the absorption spectra from which temperatures and...

13/3,K/24 (Item 5 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

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03603968 E.I. Monthly No: EIM9305-025459

Title: Control 92 -Enhancing Australia's Productivity Through Automation, Control and Instrumentation.

Author: Anon (Ed.)

Conference Title: Control 92 -Enhancing Australia's Productivity Through Automation, Control and Instrumentation

Conference Location: Perth, Aust Conference Date: 19921102

E.I. Conference No.: 17778

Source: National Conference Publication - Institution of Engineers, Australia n 92 pt 15 1992. Publ by IE Aust, Barton, Aust. 468p

Publication Year: 1992

CODEN: NPIEDX ISSN: 0313-6922

Language: English

...Abstract: adaptive controllers using neural networks, real-time knowledge-based diagnostic systems, fuzzy logic control systems, **vibration damping** with active control systems, rule-based expert systems, supervisory control and data acquisition (SCADA) technology...

...process control systems, programmable controller software design, and the man-machine interface as an intelligent **electronic system**.

13/3,K/25 (Item 6 from file: 8)

DIALOG(R)File 8: Ei Compendex(R)

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03092286 E.I. Monthly No: EIM9107-031825

Title: Modular concept for suspension control.

Author: Decker, H.; Schramm, W.; Kallenbach, R.

Conference Title: Eighteenth FISITA Congress - The Promise of New Technology in the Automotive Industry

Conference Location: Torino, Italy Conference Date: 19900507

E.I. Conference No.: 13957

Source: Proceedings - Society of Automotive Engineers. Publ by SAE, Warrendale, PA, USA. p 27-35

Publication Year: 1990
CODEN: PSOED4 ISSN: 8756-8470
Language: English

...Abstract: available. These valves allow switching times of 5 milliseconds and the complete integration into a **shock absorber**. Thus, semiactive suspension-control concepts can now be realized in vehicles that could formerly only...

...classic or fast load leveling systems. The combination of suspension-control systems with other automotive **electronic systems** open perspectives for a further improvement of the overall vehicle dynamics. Measurements on prototype cars...

13/3,K/26 (Item 7 from file: 8)
DIALOG(R)File 8: Ei Compendex(R)
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02054022 E.I. Monthly No: EI8612117638 E.I. Yearly No: EI86006990
Title: **CALCULATED CHEMISORPTION PROPERTIES OF ATOMS AND DIPOLES.**
Author: Holmstroem, Stefan
Corporate Source: Chalmers Univ of Technology, Goteborg, Swed
Source: Chalmers Tekniska Hogskola, Doktorsavhandlingar n 561 1986 37p
Publication Year: 1986
CODEN: DCTHAT ISSN: 0366-8746
Language: ENGLISH

...Abstract: method that self-consistently solves the Kohn-Sham equations for a localized perturbation in an **electronic system**. The metallic substrate is modelled by a semi-infinite jellium, and results are obtained for...

...energy, induced dipole moment, density of states and, in the case of a chemisorbed dipole, **vibrational damping** of the internal stretch mode.
(Edited author abstract) 81 refs.

13/3,K/27 (Item 8 from file: 8)
DIALOG(R)File 8: Ei Compendex(R)
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01833605 E.I. Monthly No: EI8512123337 E.I. Yearly No: EI85097928
Title: **IMPROVING THE EFFICIENCY OF RUPTURE-DISK SYSTEMS.**
Author: Beveridge, Hugh
Corporate Source: BS&B Safety Systems, Engl
Source: Process Engineering (London) v 66 n 1 Jan 1985 p 35,37
Publication Year: 1985
CODEN: PSEGAP ISSN: 0370-1859
Language: ENGLISH

...Abstract: can occur in practice. The author discusses some of these problems and describes a new **shock absorber /rupture-disk system** which reduces the risk of malfunction. (Edited author abstract)

13/3,K/28 (Item 9 from file: 8)
DIALOG(R)File 8: Ei Compendex(R)
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01810022 E.I. Monthly No: EI8510086950 E.I. Yearly No: EI85015663
Title: **CONTROLLING RUNAWAY PRESSURE IN CHEMICAL PLANTS.**
Author: Beveridge, H. J. R.

Corporate Source: BS&B Safety Systems, London, Engl
Source: Chemsa v 11 n 2 Feb 1985 p 53-54
Publication Year: 1985
CODEN: CHEMDU ISSN: 0379-4687
Language: ENGLISH

...Abstract: can occur in practice. The author discusses some of these problems and describes a new **shock - absorber /rupture- disk system** which reduces the risk of malfunction. (Author abstract)

13/3,K/29 (Item 10 from file: 8)
DIALOG(R)File 8:EI Compendex(R)
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01016917 E.I. Monthly No: EI8105043588 E.I. Yearly No: EI81076114
Title: **Computer Modeling of Vibration - Resistance and Strength Design of Printed Electronic Units.**
Title: MASHINNOE MODELIROVANIIE DLYA RASCHETA NA VIBROUSTOICHIVOST' I PROCHNOST' KONSTRUKTSII PECHATNYKH UZLOV REA.
Author: Kofanov, Yu. N.; Kozhevnikov, A. M.; Chernushenko, A. M.
Source: Izvestiya Vysshikh Uchebnykh Zavedenii, Radioelektronika v 23 n 6 Jun 1980 p 74-77
Publication Year: 1980
CODEN: IVUZZB ISSN: 0021-3470
Language: RUSSIAN

Title: **Computer Modeling of Vibration - Resistance and Strength Design of Printed Electronic Units.**

13/3,K/30 (Item 11 from file: 8)
DIALOG(R)File 8:EI Compendex(R)
(c) 2006 Elsevier Eng. Info. Inc. All rts. reserv.

00419785 E.I. Monthly No: EI7412080976
Title: **UNIQUE SILICONE MATERIALS AND TECHNIQUES FOR MICRO AND MACRO ELECTRONIC PACKAGING.**
Author: Smith, Schuyler B.
Corporate Source: Dow Corning Corp, Midland, Mich
Source: SAMPE Natl Symp and Exhib, 19th, Pap, Buena Park, Calif, Apr 23-25 1974 p 686-692. Publ by SAMPE Natl Bus Off (Vol 19), Azusa, Calif, 1974
Publication Year: 1974
Language: ENGLISH

...Abstract: silicone technology that have resulted in new and improved products for use in packaging airborne **electronic systems**. These products include gelatinous membranes for I. C. packaging, thermally conductive noncorrosive cements for power devices, conformal coatings for printed circuit arrays, flame retardant impregnants, and embedding compounds, **vibration damping** materials, optical bonding resins and controlled volatility sealants.

13/3,K/31 (Item 1 from file: 35)
DIALOG(R)File 35:Dissertation Abs Online
(c) 2006 ProQuest Info&Learning. All rts. reserv.

01456709 ORDER NO: AADAA-I9602787
DYNAMIC INTERACTION BETWEEN THIN FILM BEARINGS AND VIBRATING STRUCTURES (LUBRICANT)
Author: WANG, YEN-KUN

Degree: PH.D.
Year: 1995
Corporate Source/Institution: UNIVERSITY OF CALIFORNIA, BERKELEY (0028)
Source: VOLUME 56/09-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
PAGE 5133. 93 PAGES

...the performance and productivity of mechanical systems. Fluid film bearings have been used extensively to **damp vibration of vibrating** structures. The present study experimentally and analytically investigates the effects of the lubricant supply and...

...thin film bearings for vibration control and stabilization of high speed band, tape and hard **disk systems** in the forest products and the computer industries.

The first contribution is the experimental measurement...

13/3,K/32 (Item 1 from file: 94)
DIALOG(R)File 94:JICST-EPlus
(c)2006 Japan Science and Tech Corp(JST). All rts. reserv.

03221473 JICST ACCESSION NUMBER: 97A0620090 FILE SEGMENT: JICST-E
Selection of recent shock absorbers. Application of rotary damper.

Structure, selection and use application of rotary damper.

KACHO NOBUYOSHI (1)

(1) Fuji Seiki Co., Ltd.

Yukuatsu Gijutsu(Hydraulics & Pneumatics), 1997, VOL.36,NO.7, PAGE.9-14,
FIG.8, TBL.2

JOURNAL NUMBER: G0877ABT ISSN NO: 0914-6253

UNIVERSAL DECIMAL CLASSIFICATION: 621.8-567

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Commentary

MEDIA TYPE: Printed Publication

...ABSTRACT: the standard of selection, and applications of a rotary damper which is a small rotary **shock absorber** using the viscous resistance of a fluid and smoothes motion such as the loading of a **CD player**. The rotary dampers in whcih a disc rotor integrated with a rotating shaft or vanes...

13/3,K/33 (Item 2 from file: 94)
DIALOG(R)File 94:JICST-EPlus
(c)2006 Japan Science and Tech Corp(JST). All rts. reserv.

03066904 JICST ACCESSION NUMBER: 97A0153737 FILE SEGMENT: JICST-E
Properties and Applications of Transparent Heat Resistant Thermoplastics, ARTON.

AOKI OSAMU (1)

(1) Jpn. Synth. Rubber Co., Ltd.

JSR Tekunikaru Rebyu(JSR Technical Review (Japan Synthetic Rubber), 1996,
NO.103, PAGE.46-54, FIG.10, TBL.3, REF.7

JOURNAL NUMBER: G0998ABV ISSN NO: 0916-7129

UNIVERSAL DECIMAL CLASSIFICATION: 678.5/.8 678.06

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Commentary

MEDIA TYPE: Printed Publication

...ABSTRACT: high tensile strength. More application specific comparison proved that ARTON offers higher information density, better **vibration resistivity**, better durability, better moldability as the optical

disk; better focus aberration, better focus stability as...

...high fidelity CD, high density MO, next generation optical disks,
pick-up lens for optical **disk system**, laser light collimation
system, electronic parts, and optical film for LCD, optical fiber, etc.
(author...

13/3,K/34 (Item 3 from file: 94)

DIALOG(R)File 94:JICST-EPlus

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02270112 JICST ACCESSION NUMBER: 94A0966530 FILE SEGMENT: JICST-E
**New product scramble report. Attractiveness of heavy sound by adoption of a
new optical head mechanism. CDP-XA7ES of SONY.**

OBARA YOSHIO (1)

Rajio Gijutsu, 1994, VOL.48,NO.12, PAGE.107-110, FIG.9

JOURNAL NUMBER: F0256AAA

UNIVERSAL DECIMAL CLASSIFICATION: 621.37:534.85

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Introduction article

MEDIA TYPE: Printed Publication

...ABSTRACT: paper introduces the highest end model, which costs 250,000
Yen, of the three new **CD players**. This machine adopts "optically
fixed pickup mechanism" which was completely opposite to usual method
in order to improve the **vibration resistance** of a laser pickup. In
addition, this paper reports SONY's original "current pulse D...

13/3,K/35 (Item 4 from file: 94)

DIALOG(R)File 94:JICST-EPlus

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01901491 JICST ACCESSION NUMBER: 93A0934891 FILE SEGMENT: JICST-E
**Development of Partially Earthquake-Resisting Equipment for Tall Buildings.
Take All Possible Measures Against Earthquakes!**

Chubu Electric Power Co., Ltd.

Chubu Denryoku K.K. Gijutsu Kaihatsu Nyusu(Research and Development News.

Chubu Electric Power Co., Inc.), 1993, NO.58, PAGE.17-18, FIG.3

JOURNAL NUMBER: L1392AAG

UNIVERSAL DECIMAL CLASSIFICATION: 699.841/.842

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Introduction article

MEDIA TYPE: Printed Publication

...ABSTRACT: weak point of the system. Hence, we introduced partial
earthquake resistance that covers only magnetic **disk systems** to
maintain and improve the **seismic resistance** of the whole system in
medium and small size buildings. In this context, we developed...

13/3,K/36 (Item 1 from file: 95)

DIALOG(R)File 95:TEME-Technology & Management

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01125107 M97080028637

The tribo disk - A new tool for powder coating

(Tribo-Disk-System als neues Werkzeug fuer das Pulverspritzen)

Lambert, P

Nordson Corp., Amherst, USA

Metal Finishing, v95, n6, pp94-95,97, 1997
Document type: journal article Language: English
Record type: Abstract
ISSN: 0026-0576

ABSTRACT:

...powder disk; tribo disk application to a wide variety of parts (retrofitting of a liquid **disk system** ; coating of stapler parts; simple-to-operate powder coating systems for intricate electrical covers; interior coating of drums; coating of car roof rails, wiper blades, **shock absorbers** , and break pedals). Also in shelving and office furniture, the advantages of the tribo disk...

13/3,K/37 (Item 2 from file: 95)
DIALOG(R)File 95:TEME-Technology & Management
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00636393 E93013886005

Ein elektronisches System zur parameteradaptiven Regelung und Diagnose von Kraftfahrzeugstossdaempfern

(An **electronic system** for parameter adaptive control and diagnosis of vehicle **shock absorber**)

Busshardt, J; Fuehrer, J; Isermann, R

Elektronik im Kraftfahrzeug, Tagung, VDI-Gesellschaft Fahrzeugtechnik, Baden-Baden, D, 10.-11. September 1992VDI-Berichte, v1009, n3, pp199-216, 1992

Document type: Conference paper Language: German

Record type: Abstract

ISBN: 3-18-091009-7

ISSN: 0083-5560

(An **electronic system** for parameter adaptive control and diagnosis of vehicle **shock absorber**)

13/3,K/38 (Item 1 from file: 99)
DIALOG(R)File 99:Wilson Appl. Sci & Tech Abs
(c) 2006 The HW Wilson Co. All rts. reserv.

2073246 H.W. WILSON RECORD NUMBER: BAST93023283

Electronic control of the horizontal alignment of an optical bench

Carla, Marcello;

Measurement Science & Technology v. 4 (Apr. 1993) p. 473-5

DOCUMENT TYPE: Feature Article ISSN: 0957-0233

ABSTRACT: An **electronic system** to continuously control the horizontal alignment of a table top mounted on pneumatic damping legs is described. Table **vibration damping** is often required when using optical techniques to study a liquid-liquid or a liquid...

13/3,K/39 (Item 1 from file: 583)
DIALOG(R)File 583:Gale Group Globalbase(TM)
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09656500

Pioneer refines car audio system

Philippines: Pioneer's car audio-visual system debuts

Manila Bulletin (XAZ) 07 Dec 2001 p.B-6

Language: ENGLISH

SDV-P7, the new DVD/VCD/ **CD player** for cars with optical digital output

by Pioneer made its debut in the Philippines recently. The anti-dust, heat and **vibration resistant** system is equipped with the Detachable Face Security head unit security technology. Other features of...

13/3,K/40 (Item 2 from file: 583)
DIALOG(R)File 583:Gale Group Globalbase(TM)
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05142563
Shock-resistant portables precede MD units in market
US - SHOCK-RESISTANT CD PORTABLES TO BE LAUNCHED
Billboard (BBD) 13 June 1992 p9,73
ISSN: 0006-2510

Sony and Fisher will both be launching in June 1992 **shock - resistant** portable high-end **CD player** models. Both retailing at about USD1r500 Sony's Model D515 and Fisher's Walkabout both...

13/3,K/41 (Item 3 from file: 583)
DIALOG(R)File 583:Gale Group Globalbase(TM)
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05002203
Superkompakt CD-vaxlare for bilen
SWEDEN - PANASONIC LAUNCHES DP60 CD PLAYER
Rateko (RKO) 0 April 1992 p54
ISSN: 0033-9962
Language: Swedish

Panasonic will launch the DP60 car **CD player** which can take 6 CDs simultaneously. The unit is specially secured for bumps through the use of a **shock absorbing** mechanism and electronic **vibration** detection. The unit features MASH 1-bit technology. The small unit can be installed horizontally...

13/3,K/42 (Item 4 from file: 583)
DIALOG(R)File 583:Gale Group Globalbase(TM)
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04210360
NEW CD-PLAYERS COMPARED BY WHICH?
UK - NEW CD-PLAYERS COMPARED BY WHICH?
Which? (WH) 0 April 1991 p204-207
ISSN: 0043-4841

Choosing a **CD - player** can be difficult due to the numerous products on offer. In a product survey, Which? reviews **CD - players** which have been launched recently and compares their features, such as track access, programming, repeat and displays. The review also looks at ease of use, **shock resistance**, error correction and target price. **CD - players** in the standard, multi-disc and portable categories are surveyed.

13/3,K/43 (Item 5 from file: 583)
DIALOG(R)File 583:Gale Group Globalbase(TM)
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02788173
PCO INC PROFILE
US - PCO INC PROFILE

... in 2 areas: basic opto-electronics research, and production of opto-electronic modules for military **electronic systems** . Many of PCO's products are hermetically sealed and offer a very high operating temperature range, high **shock resistance** , and excellent stability. Since no formal military specifications exist for opto-electronic devices, PCO's...

13/3,K/44 (Item 6 from file: 583)
DIALOG(R)File 583:Gale Group Globalbase(TM)
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02516315

LUX LAUNCHES D-105U CD PLAYER

JAPAN - LUX LAUNCHES D-105U CD PLAYER
Journal of the Electronics Industry (JEI) 0 January 1989 p79
ISSN: 0385-4515

Lux has launched its D-105U, a compact **disk player** which features a triode vacuum tube. Weighing 6.6 kg it features 20-number random...

... coaxial digital output ports, and costs USD1r736. The machine has a rigid rack mechanism which **resists external vibrations**.

13/3,K/45 (Item 7 from file: 583)
DIALOG(R)File 583:Gale Group Globalbase(TM)
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01398278

SONY DEVELOPS OPTICAL VIDEO DISK PLAYER

JAPAN - SONY DEVELOPS OPTICAL VIDEO DISK PLAYER
Journal of the Electronics Industry (JEI) 0 October 1987 p81
ISSN: 0385-4515

Sony has developed an optical video **disk player** , LDP-1400, and **shock - absorber** , LSA-1500, enabling the player to be used in a vehicle. The LDP-1400, a...

13/3,K/46 (Item 1 from file: 483)
DIALOG(R)File 483:Newspaper Abs Daily
(c) 2006 ProQuest Info&Learning. All rts. reserv.

06148355 SUPPLIER NUMBER: 60217957

The Jukebox Comes Home

Marriott, Michel

New York Times, p 1

Sep 14, 2000

ISSN: 0362-4331

NEWSPAPER CODE: NYT

; Newspaper article

LANGUAGE: English

RECORD TYPE: ABSTRACT

...ABSTRACT: a 17.3-gigabyte hard drive, and is about the size of a large multidisc **CD player** . It is designed primarily to copy songs from CD's (it can also copy from...

...and a headphone jack on its right side. But the device's resemblance to a **CD player** stops there. The Nomad Jukebox doesn't play CD's. What it does, once linked...

...cable, is store more than 100 hours of MP3 music files on its six-gigabyte, **shock - resistant** hard drive. It will list every CD loaded into a changer. Drawing upon PC technology...

13/3,K/47 (Item 2 from file: 483)
DIALOG(R)File 483:Newspaper Abs Daily
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04710570

Mitsubishi's capable heavyweight Sport-utility has plenty of muscle, complemented by luxury touches

DeVault, Russ

Atlanta Journal Constitution, Sec R, p 35, col 1

Sep 13, 1997

NEWSPAPER CODE: ATCJ

DOCUMENT TYPE: Product Review-Favorable; Newspaper

LANGUAGE: English RECORD TYPE: ABSTRACT

LENGTH: Medium (6-18 col inches)

...ABSTRACT: Montero SR, given about \$6,000 worth of options, lacked little. Niceties ranged from two **CD players** ---a single-disc unit in the dash and a 10-disc changer mounted in the...

...height, the Montero SR isn't an ill-handling or hard-riding vehicle. The optional **shock absorbers** with hard, medium and soft settings make an appreciable difference in the comfort and performance...

File 344:Chinese Patents Abs Jan 1985-2006/Jan
(c) 2006 European Patent Office
File 347:JAPIO Dec 1976-2005/Dec(Updated 060404)
(c) 2006 JPO & JAPIO
File 350:Derwent WPIX 1963-2006/UD,UM &UP=200643
(c) 2006 The Thomson Corp.
File 371:French Patents 1961-2002/BOPI 200209
(c) 2002 INPI. All rts. reserv.

Set	Items	Description
S1	127045	(VIBRAT? OR SHOCK OR SEISMIC) (3N) (ABSORPTION OR ABSORB??? - OR DAMP? OR RESIST? OR CUSHION)
S2	36583	(ELECTRONIC() (DEVICE?? OR UNIT?? OR SYSTEM?? OR APPARATUS) OR (CD OR DVD OR (DIGITAL()VERSATILE OR COMPACT) ()DISC?? OR D-ISK??)) () (PLAYER?? OR UNITS OR SYSTEM??)
S3	1821417	RESIN?? OR POLYETHYLENE
S4	1411271	BUCKLE?? OR BUCKLING OR BEND??? OR MOMENT OR TOURQUE OR C-OMPRESS? OR DEFORM?
S5	717	AU=(KUWAJIMA, H? OR KUWAJIMA H?)
S6	134381	(CAPTUR? OR DIGITAL()VIDEO()STORAGE) (3N)DEVICE?? OR MEDIA
S7	289	S1(S) (S2 OR S6)
S8	6	S7(3N) (S3 OR S4)
S9	4	S8 NOT (VEHICLE OR EXCAVATOR??)
S10	0	S7 AND S5
S11	231	S5 AND IC=G11B?
S12	20	S11 AND S1
S13	2	S12(S) (S2:S4)
S14	2	S13 NOT S9
S15	18	S12 NOT AD=20030331/PR

9/3,K/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2006 The Thomson Corp. All rts. reserv.

016483414 **Image available**

WPI Acc No: 2004-641357/200462

XRPX Acc No: N04-507134

Shock absorber for rotary motor of optical disk player , uses damper and compression device to damp shock selectively depending on motor rotation speed

Patent Assignee: BENQ CORP (BENQ-N); CHAN S (CHAN-I); LIN C (LINC-I); LIN J (LINJ-I)

Inventor: CHAN S; LIN C; LIN J

Number of Countries: 002 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20040163096	A1	20040819	US 2004777624	A	20040211	200462 B
TW 200416681	A	20040901	TW 2003103188	A	20030217	200624

Priority Applications (No Type Date): TW 2003103188 A 20030217

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20040163096	A1		9 G11B-017/00	
TW 200416681	A		G11B-033/08	

Shock absorber for rotary motor of optical disk player , uses damper and compression device to damp shock selectively depending on motor rotation speed

9/3,K/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2006 The Thomson Corp. All rts. reserv.

013749827 **Image available**

WPI Acc No: 2001-234056/200124

XRPX Acc No: N01-167285

Vibration dampening mechanism, for use with data storage media drive canister, makes bend portion of cantilevered dampening spring to contact with bottom surface of canister support structure

Patent Assignee: LSI LOGIC CORP (LSIL-N)

Inventor: FLYNN T M; HARVEY R T

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6166900	A	20001226	US 97990930	A	19971215	200124 B

Priority Applications (No Type Date): US 97990930 A 19971215

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 6166900	A	15	H05K-005/00	

Vibration dampening mechanism, for use with data storage media drive canister, makes bend portion of cantilevered dampening spring to contact with bottom surface of canister support structure

9/3,K/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

002265712

WPI Acc No: 1979-64916B/197936

Two-way deep well drill linkage shock absorber - has springs alternately active between compressed and extended tube and casing

Patent Assignee: CHRISTENSEN INC (CHRI-N)

Inventor: AUMANN J T; OSTERTAG A

Number of Countries: 004 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 2906247	A	19790830				197936 B
GB 2015060	A	19790905				197936
FR 2417625	A	19791019				197948
US 4186569	A	19800205				198007
DE 2906247	B	19810212				198108
GB 2015060	B	19820630				198226

Priority Applications (No Type Date): US 78879237 A 19780221

...Abstract (Basic): a torsional moment transfer device, and fitted with spring media for impact modulation. The spring media , pref. in compression springs form, are alternately transferable for shock absorption, with the tubular unit and casing both...

9/3,K/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

002014070

WPI Acc No: 1978-27097A/197815

Curving of reinforced tubular rubber articles - without use of interiorly applied pressure medium, by longitudinal compression with consequent shortening

Patent Assignee: CONTINENTAL GUMMI WERKE AG (CONW)

Inventor: BERNITZ B

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 2643236	A	19780406				197815 B

Priority Applications (No Type Date): DE 2643236 A 19760925

...Abstract (Basic): pneumatic tyres, fittings, pneumatic shock absorber bellows, are curved, without recourse to interiorly applied pressure media, by compressing the article lengthwise; its length consequently being reduced during the curving operation...

14/3,K/1 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

017361970 **Image available**

WPI Acc No: 2005-685614/200571

XRPX Acc No: N05-562334

Head support apparatus for hard disk drive, has coil arm contacting crashing stops to control rotation of rotary shaft, such that flat contact surface of crashing stops are perpendicular or parallel to axial center of rotary shaft

Patent Assignee: MATSUSHITA DENKI SANGYO KK (MATU)

Inventor: HASHI H; KUWAJIMA H

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2005267717	A	20050929	JP 200476254	A	20040317	200571 B

Priority Applications (No Type Date): JP 200476254 A 20040317

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 2005267717	A	48	G11B-021/02	

Abstract (Basic):

... Deformation of shock absorbing material of crashing stop due to thrust variation is restrained by simple structure. Thus improving ...

14/3,K/2 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

016587130 **Image available**

WPI Acc No: 2004-745865/200473

XRPX Acc No: N04-589089

Shock-absorbing unit for electronic device e.g. magnetic disk drive, has shock-absorbing base part to form bending part vertical to shock direction, and to start buckling at bending part so as to absorb shock when receiving impact

Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (MATU); MATSUSHITA DENKI SANGYO KK (MATU)

Inventor: KUWAJIMA H

Number of Countries: 035 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20040190193	A1	20040930	US 2004812993	A	20040331	200473 B
EP 1471534	A1	20041027	EP 20047845	A	20040331	200473
JP 2004315087	A	20041111	JP 200495204	A	20040329	200474
CN 1571065	A	20050126	CN 200459523	A	20040331	200530

Priority Applications (No Type Date): JP 200394953 A 20030331

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

US 20040190193 A1 19 G11B-005/012

EP 1471534 A1 E G11B-033/08

Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB

GR HU IE IT LI LT LU LV MC MK NL PL PT RO SE SI SK TR

JP 2004315087 A 16 B65D-081/107

CN 1571065 A G11B-033/08

... for electronic device e.g. magnetic disk drive, has shock-absorbing base part to form bending part vertical to shock direction, and to start buckling at bending part so as to absorb shock when receiving impact

Abstract (Basic):

... than a thickness of a shock-absorbing flexible part (18b). The base part forms a bending part vertical to the shock direction, and starts buckling at the bending part so as to absorb shock when receiving an impact. The base part and the flexible part are disposed so that...

... The shock-absorbing base part starts buckling at the bending part so as to absorb shock when receiving impact, thereby preventing main body of disk drive from receiving large shock, and...

15/3,K/1 (Item 1 from file: 347)

DIALOG(R)File 347:JAPIO

(c) 2006 JPO & JAPIO. All rts. reserv.

08026958 **Image available**

HEAD SUPPORTING DEVICE AND DISK DRIVE USING THE SAME

PUB. NO.: 2004-139717 [JP 2004139717 A]

PUBLISHED: May 13, 2004 (20040513)

INVENTOR(s): UENO YOSHIHIRO

KUWAJIMA HIDEKI

DEN SHISEI

APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD

APPL. NO.: 2003-331170 [JP 2003331170]

FILED: September 24, 2003 (20030924)

PRIORITY: 2002-283193 [JP 2002283193], JP (Japan), September 27, 2002 (20020927)

INVENTOR(s): UENO YOSHIHIRO

KUWAJIMA HIDEKI

DEN SHISEI

INTL CLASS: G11B-021/21

ABSTRACT

... while applying required sufficient load on a head, which is thin and which has high shock resistance, and to provide a disk drive using the head supporting device.

SOLUTION: The head supporting...

15/3,K/2 (Item 2 from file: 347)

DIALOG(R)File 347:JAPIO

(c) 2006 JPO & JAPIO. All rts. reserv.

07958378 **Image available**

HEAD SUPPORTING MECHANISM, HEAD DRIVING DEVICE, AND DISK DEVICE

PUB. NO.: 2004-071137 [JP 2004071137 A]

PUBLISHED: March 04, 2004 (20040304)
INVENTOR(s): UENO YOSHIHIRO
KUWAJIMA HIDEKI
APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD
APPL. NO.: 2003-163631 [JP 2003163631]
FILED: June 09, 2003 (20030609)
PRIORITY: 2002-169553 [JP 2002169553], JP (Japan), June 11, 2002
(20020611)

INVENTOR(s): UENO YOSHIHIRO
KUWAJIMA HIDEKI
INTL CLASS: G11B-021/21

ABSTRACT

... device, and a disk device using the same which have high flexibility,
are excellent in **shock resistance**, and are thin while giving necessary
and sufficient pressing force to the head.
SOLUTION: The...

15/3,K/3 (Item 3 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2006 JPO & JAPIO. All rts. reserv.

07958330 **Image available**
HEAD SUPPORT ARM, HEAD SUPPORT SYSTEM, AND DISK DEVICE

PUB. NO.: 2004-071089 [JP 2004071089 A]
PUBLISHED: March 04, 2004 (20040304)
INVENTOR(s): KUWAJIMA HIDEKI
UENO YOSHIHIRO
APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD
APPL. NO.: 2002-231381 [JP 2002231381]
FILED: August 08, 2002 (20020808)

INVENTOR(s): KUWAJIMA HIDEKI
UENO YOSHIHIRO
INTL CLASS: G11B-021/21

ABSTRACT

... mounted on a slider by external impacts, and a highly reliable disk
device having high **shock resistance** and fast accessing.

SOLUTION: The head support device 16 is constructed in such a manner...

15/3,K/4 (Item 4 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2006 JPO & JAPIO. All rts. reserv.

07958309 **Image available**
DISK UNIT AND HEAD SUPPORTING DEVICE

PUB. NO.: 2004-071068 [JP 2004071068 A]
PUBLISHED: March 04, 2004 (20040304)
INVENTOR(s): UENO YOSHIHIRO
KUWAJIMA HIDEKI
APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD
APPL. NO.: 2002-229745 [JP 2002229745]
FILED: August 07, 2002 (20020807)

INVENTOR(s): UENO YOSHIHIRO
KUWAJIMA HIDEKI

INTL CLASS: G11B-021/12 ; G11B-021/22

ABSTRACT

... do not collide with each other even by an external shock and which have high **shock resistance** .

SOLUTION: The disk unit is composed of a disk 112 holding a recording medium, a...

15/3,K/5 (Item 5 from file: 347)

DIALOG(R)File 347:JAPIO

(c) 2006 JPO & JAPIO. All rts. reserv.

07958294 **Image available**

DISK DEVICE

PUB. NO.: 2004-071053 [JP 2004071053 A]

PUBLISHED: March 04, 2004 (20040304)

INVENTOR(s): UENO YOSHIHIRO

KUWAJIMA HIDEKI

MIYAMOTO MAKOTO

APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD

APPL. NO.: 2002-228860 [JP 2002228860]

FILED: August 06, 2002 (20020806)

INVENTOR(s): UENO YOSHIHIRO

KUWAJIMA HIDEKI

MIYAMOTO MAKOTO

INTL CLASS: G11B-021/21 ; G11B-021/12 ; G11B-021/22

ABSTRACT

... BE SOLVED: To provide a disk device which has a head supporting device of high **shock resistance** and is capable of surely performing L/UL operation or CSS operation.

SOLUTION: The device...

15/3,K/6 (Item 6 from file: 347)

DIALOG(R)File 347:JAPIO

(c) 2006 JPO & JAPIO. All rts. reserv.

07918087 **Image available**

HEAD SUPPORT UNIT AND DISK APPARATUS EMPLOYING THE SAME

PUB. NO.: 2004-030846 [JP 2004030846 A]

PUBLISHED: January 29, 2004 (20040129)

INVENTOR(s): MIYAMOTO MAKOTO

KUWAJIMA HIDEKI

APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD

APPL. NO.: 2002-189341 [JP 2002189341]

FILED: June 28, 2002 (20020628)

INVENTOR(s): MIYAMOTO MAKOTO

KUWAJIMA HIDEKI

INTL CLASS: G11B-021/21 ; G11B-021/02 ; G11B-021/12

ABSTRACT

... high flexibility within a region to support the head with a low profile and high **shock resistance** , and also to provide a disk apparatus employing the same.

SOLUTION: The disk apparatus is...

15/3,K/7 (Item 7 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2006 JPO & JAPIO. All rts. reserv.

07615490 **Image available**
HEAD SUPPORTING DEVICE AND DISK DRIVE UNIT USING THE SAME

PUB. NO.: 2003-109337 [JP 2003109337 A]
PUBLISHED: April 11, 2003 (20030411)
INVENTOR(s): MIYAMOTO MAKOTO
KUWAJIMA HIDEKI
SAKAMOTO KENICHI
APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD
APPL. NO.: 2002-213411 [JP 2002213411]
FILED: July 23, 2002 (20020723)
PRIORITY: 2001-225910 [JP 2001225910], JP (Japan), July 26, 2001
(20010726)

INVENTOR(s): MIYAMOTO MAKOTO
KUWAJIMA HIDEKI
SAKAMOTO KENICHI
INTL CLASS: G11B-021/12 ; G11B-021/21 ; G11B-021/22

ABSTRACT

... SOLVED: To provide an L/UL (loading/unloading mechanism) type head supporting device having high **shock resistance** with a simple structure while reducing a load applied to a voice coil motor (VCM...

15/3,K/8 (Item 8 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2006 JPO & JAPIO. All rts. reserv.

06056254 **Image available**
DYNAMIC VIBRATION REDUCER AND DISK STORAGE REGENERATING DEVICE USING
DYNAMIC VIBRATION REDUCER

PUB. NO.: 10-339354 [JP 10339354 A]
PUBLISHED: December 22, 1998 (19981222)
INVENTOR(s): KUWAJIMA HIDEKI
OKAMOTO HIROTAKA
APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD [000582] (A Japanese Company
or Corporation), JP (Japan)
APPL. NO.: 09-151191 [JP 97151191]
FILED: June 09, 1997 (19970609)

INVENTOR(s): KUWAJIMA HIDEKI
OKAMOTO HIROTAKA
INTL CLASS: F16F-015/08; G11B-033/08

ABSTRACT

PROBLEM TO BE SOLVED: To increase a frequency range of **vibration** for **damping vibration** with a simple structure by suppressing vibration of a frequency region lower than a resonance...

15/3,K/9 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2006 The Thomson Corp. All rts. reserv.

017361970 **Image available**

WPI Acc No: 2005-685614/200571

XRPX Acc No: N05-562334

Head support apparatus for hard disk drive, has coil arm contacting crashing stops to control rotation of rotary shaft, such that flat contact surface of crashing stops are perpendicular or parallel to axial center of rotary shaft

Patent Assignee: MATSUSHITA DENKI SANGYO KK (MATU)

Inventor: HASHI H; **KUWAJIMA H**

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2005267717	A	20050929	JP 200476254	A	20040317	200571 B

Priority Applications (No Type Date): JP 200476254 A 20040317

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2005267717	A		48	G11B-021/02	

...Inventor: **KUWAJIMA H**

Abstract (Basic):

... Deformation of **shock absorbing** material of crashing stop due to thrust variation is restrained by simple structure. Thus improving

International Patent Class (Main): **G11B-021/02**

International Patent Class (Additional): **G11B-021/21**

15/3,K/10 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

016731955 **Image available**

WPI Acc No: 2005-056231/200506

XRPX Acc No: N05-048812

Actuator gripping device for disk drive e.g. magnetic disk drive, has head support arm connected to pivot pedestal, where forces are applied to arm to move arm from shunt position to read and/or write position on recording medium

Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (MATU); MATSUSHITA DENKI SANGYO KK (MATU); KITA H (KITA-I); **KUWAJIMA H (KUWA-I); OBATA S (OBAT-I)**

Inventor: KITA H; **KUWAJIMA H** ; OBATA S

Number of Countries: 036 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20040240116	A1	20041202	US 2004856943	A	20040601	200506 B
EP 1484749	A1	20041208	EP 200412499	A	20040526	200506
JP 2005018965	A	20050120	JP 2004162889	A	20040601	200508
CN 1574035	A	20050202	CN 200446525	A	20040601	200532

Priority Applications (No Type Date): JP 2003156420 A 20030602

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20040240116	A1		28	G11B-005/60	
EP 1484749	A1	E		G11B-005/54	

Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IT LI LT LU LV MC MK NL PL PT RO SE SI SK TR

JP 2005018965 A 25 G11B-021/12

CN 1574035 A G11B-021/22

...Inventor: **KUWAJIMA H**

Abstract (Basic):

... medium. The device thus prevents the medium from being damaged,

and hence assuring very high **shock resistance** , excellent response characteristic and reliable high-speed access...
International Patent Class (Main): **G11B-005/54** ...

... **G11B-005/60** ...

... **G11B-021/12** ...

... **G11B-021/22**

International Patent Class (Additional): **G11B-005/48** ...

... **G11B-021/02** ...

... **G11B-021/21**

15/3,K/11 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2006 The Thomson Corp. All rts. reserv.

016255257 **Image available**
WPI Acc No: 2004-413151/200439
Related WPI Acc No: 2002-601390; 2003-815046; 2003-815088
XRPX Acc No: N04-327848

Head support arm for disk drive e.g. optical disk drive, has read and write head connected to pivot pedestal, and arm pivotable about head arm pivot axis by thrusting force to levitate by record medium

Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (MATU)

Inventor: KUWAJIMA H ; MIYAMOTO M; SAKAMOTO K

Number of Countries: 003 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1418573	A2	20040512	EP 20023370	A	20020213	200439 B
			EP 20042222	A	20020213	
EP 1418573	B1	20050615	EP 20023370	A	20020213	200540
			EP 20042222	A	20020213	
DE 60204700	E	20050721	DE 204700	A	20020213	200548
			EP 20042222	A	20020213	
DE 60204700	T2	20051201	DE 204700	A	20020213	200579
			EP 20042222	A	20020213	

Priority Applications (No Type Date): JP 2001203600 A 20010704; JP 200134916 A 20010213; JP 2001104108 A 20010403

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1418573	A2	E	27	G11B-005/48	Div ex application EP 20023370 Div ex patent EP 1231598

Designated States (Regional): DE FR GB

EP 1418573	B1	E	G11B-005/48	Div ex application EP 20023370 Div ex patent EP 1231598
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Designated States (Regional): DE FR GB

DE 60204700	E	G11B-005/48	Based on patent EP 1418573
DE 60204700	T2	G11B-005/48	Based on patent EP 1418573

Inventor: KUWAJIMA H ...

Abstract (Basic):

... The head support arm provides high **resistance** to **shock** , high responsivity, high resiliency, and capability of making a high speed access even if a...

International Patent Class (Main): **G11B-005/48**

International Patent Class (Additional): **G11B-021/02**

15/3,K/12 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX
(c) 2006 The Thomson Corp. All rts. reserv.

016127597 **Image available**

WPI Acc No: 2004-285473/200427

XRPX Acc No: N04-226514

Head support device for recording and reproducing operation on recording medium e.g. magnetic disk, has base arm with vertical rotation supporting point, and head is arranged on surface opposing recording medium of head slider

Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (MATU); MATSUSHITA DENKI SANGYO KK (MATU); DENG Z (DENG-I); KUWAJIMA H (KUWA-I); UENO Y (UENO-I)

Inventor: DENG Z; KUWAJIMA H ; UENO Y

Number of Countries: 034 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1406245	A2	20040407	EP 200321683	A	20030929	200427 B
JP 2004139717	A	20040513	JP 2003331170	A	20030924	200432
US 20040130824	A1	20040708	US 2003670366	A	20030926	200445
CN 1492436	A	20040428	CN 2003159852	A	20030926	200446

Priority Applications (No Type Date): JP 2002283193 A 20020927

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 1406245 A2 E 38 G11B-005/48

Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB

GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

JP 2004139717 A 31 G11B-021/21

US 20040130824 A1 G11B-005/48

CN 1492436 A G11B-021/21

...Inventor: KUWAJIMA H

Abstract (Basic):

... thereby ensuring high flexibility while applying an adequate load to the head, and assures excellent **shock resistance** .

International Patent Class (Main): G11B-005/48 ...

... G11B-021/21

International Patent Class (Additional): G11B-005/60

15/3,K/13 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

016000908 **Image available**

WPI Acc No: 2004-158758/200416

XRPX Acc No: N04-126871

Head supporting assembly for disk drive, has resilient member with one end connected to supporting arm and another end fixed to base arm to urge head supporting assembly towards disk

Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (MATU); MATSUSHITA DENKI SANGYO KK (MATU); DENG Z (DENG-I); KUWAJIMA H (KUWA-I)

Inventor: DENG Z; KUWAJIMA H

Number of Countries: 034 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1388847	A1	20040211	EP 200317507	A	20030805	200416 B
JP 2004087101	A	20040318	JP 2003276859	A	20030718	200420
US 20040090711	A1	20040513	US 2003632860	A	20030804	200432
CN 1489147	A	20040414	CN 2003152672	A	20030805	200442
US 7068469	B2	20060627	US 2003632860	A	20030804	200643

Priority Applications (No Type Date): JP 2002229747 A 20020807

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 1388847 A1 E 17 G11B-005/60

Designated States (Regional): AL AT BE BG CH CY CZ DE DK EE ES FI FR GB

GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

JP 2004087101 A 14 G11B-021/21

US 20040090711 A1 G11B-005/48

CN 1489147 A G11B-021/21

US 7068469 B2 G11B-005/48

...Inventor: KUWAJIMA H

Abstract (Basic):

... Secures and stabilizes **shock resistance** of disk drive...

International Patent Class (Main): G11B-005/48 ...

... G11B-005/60 ...

... G11B-021/21

International Patent Class (Additional): G11B-005/48

15/3,K/14 (Item 6 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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015752886 **Image available**

WPI Acc No: 2003-815088/200377

Related WPI Acc No: 2002-601390; 2003-815046; 2004-413151

XRPX Acc No: N03-652391

Disk drive e.g. magnetic disk drive has support arm that is rotatable in radial direction about bearing unit, and in perpendicular direction to writing surface of disk about pivot pedestal

Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (MATU)

Inventor: KUWAJIMA H ; MIYAMOTO M; SAKAMOTO K

Number of Countries: 024 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1351220	A2	20031008	EP 20023370	A	20020213	200377 B
			EP 200312631	A	20020213	
EP 1351220	B1	20050413	EP 20023370	A	20020213	200525
			EP 200312631	A	20020213	
DE 60203693	E	20050519	DE 203693	A	20020213	200535
			EP 200312631	A	20020213	
DE 60203693	T2	20050915	DE 203693	A	20020213	200560
			EP 200312631	A	20020213	

Priority Applications (No Type Date): JP 2001203600 A 20010704; JP

200134916 A 20010213; JP 2001104108 A 20010403

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 1351220 A2 E 27 G11B-005/48 Div ex application EP 20023370

Div ex patent EP 1231598

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR HU IE IT

LI LT LU LV MC MK NL PT SE TR

EP 1351220 B1 E G11B-005/48 Div ex application EP 20023370

Div ex patent EP 1231598

Designated States (Regional): DE FR GB

DE 60203693 E G11B-005/48 Based on patent EP 1351220

DE 60203693 T2 G11B-005/48 Based on patent EP 1351220

Inventor: KUWAJIMA H ...

Abstract (Basic):

... Improves **shock resistance** , responsivity and capability of
high speed access. Also reduces undesired vibrations of the support arm

...
International Patent Class (Main): **G11B-005/48**
International Patent Class (Additional): **G11B-021/12**

15/3,K/15 (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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015752844 **Image available**
WPI Acc No: 2003-815046/200377
Related WPI Acc No: 2002-601390; 2003-815088; 2004-413151
XRPX Acc No: N03-652354

**Levitating-type head supporting device used for disk drive, changes
amount of thrusting force provided by resilient structure to support arm
which is rotatable in radial direction of disk**

Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (MATU)

Inventor: **KUWAJIMA H** ; MIYAMOTO M; SAKAMOTO K

Number of Countries: 026 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1349151	A2	20031001	EP 20023370	A	20020213	200377 B
			EP 200312630	A	20020213	
EP 1349151	B1	20051228	EP 20023370	A	20020213	200605
			EP 200312630	A	20020213	
DE 60208330	E	20060202	DE 208330	A	20020213	200615
			EP 200312630	A	20020213	
DE 60208330	T2	20060629	DE 208330	A	20020213	200643
			EP 200312630	A	20020213	

Priority Applications (No Type Date): JP 2001203600 A 20010704; JP
200134916 A 20010213; JP 2001104108 A 20010403

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1349151	A2	E	27	G11B-005/48	Div ex application EP 20023370 Div ex patent EP 1231598
					Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR
EP 1349151	B1	E		G11B-005/48	Div ex application EP 20023370 Div ex patent EP 1231598
					Designated States (Regional): DE FR GB
DE 60208330	E			G11B-005/48	Based on patent EP 1349151
DE 60208330	T2			G11B-005/48	Based on patent EP 1349151

Inventor: **KUWAJIMA H** ...

Abstract (Basic):

... the support arm in radial direction of disk. Thus, disk drive
small in size, highly **resistant** to **shock** , excellent in portability
with high speed access and simple in structure, is achieved. Also by...

International Patent Class (Main): **G11B-005/48**
International Patent Class (Additional): **G11B-021/02**

15/3,K/16 (Item 8 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2006 The Thomson Corp. All rts. reserv.

014838912 **Image available**
WPI Acc No: 2002-659618/200271
XRPX Acc No: N02-521298

**Disk drive e.g. magnetic disk drive for PDA, cellular phone, has housing
of specified dimension for mounting head supporting device having plate**

spring for moving support arm towards and away from recording medium
 Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (MATU); MATSUSHITA DENKI
 SANGYO KK (MATU); KUWAJIMA H (KUWA-I); MATSUOKA K (MATS-I); MIYAMOTO M
 (MIYA-I); OBATA S (OBAT-I); SAKAMOTO K (SAKA-I); SHINOHARA K (SHIN-I)
 Inventor: KUWAJIMA H ; MATSUOKA K; MIYAMOTO M; OBATA S; SAKAMOTO K;
 SHINOHARA K

Number of Countries: 029 Number of Patents: 011

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1239485	A2	20020911	EP 20024944	A	20020305	200271 B
US 20020145822	A1	20021010	US 200287420	A	20020301	200274
JP 2002260356	A	20020913	JP 200161300	A	20010306	200276
JP 2002334555	A	20021122	JP 2001136010	A	20010507	200307
CN 1374657	A	20021016	CN 2002106755	A	20020306	200311
JP 3395774	B2	20030414	JP 200161300	A	20010306	200328
US 20040233573	A1	20041125	US 200287420	A	20020301	200478
			US 2004872720	A	20040621	
US 6826018	B2	20041130	US 200287420	A	20020301	200479
EP 1239485	B1	20050622	EP 20024944	A	20020305	200541
DE 60204730	E	20050728	DE 204730	A	20020305	200551
			EP 20024944	A	20020305	
DE 60204730	T2	20051201	DE 204730	A	20020305	200579
			EP 20024944	A	20020305	

Priority Applications (No Type Date): JP 2001136010 A 20010507; JP
 200161300 A 20010306

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1239485	A2	E	31	G11B-033/12	
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT					
LI LT LU LV MC MK NL PT RO SE SI TR					
US 20020145822	A1			G11B-017/00	
JP 2002260356	A		12	G11B-021/12	
JP 2002334555	A		11	G11B-025/04	
CN 1374657	A			G11B-021/16	
JP 3395774	B2		12	G11B-021/12	Previous Publ. patent JP 2002260356
US 20040233573	A1			G11B-017/00	Cont of application US 200287420
US 6826018	B2			G11B-021/22	
EP 1239485	B1	E		G11B-033/12	
Designated States (Regional): DE FR GB					
DE 60204730	E			G11B-033/12	Based on patent EP 1239485
DE 60204730	T2			G11B-033/12	Based on patent EP 1239485
Inventor: KUWAJIMA H ...					

Abstract (Basic):

... The plate springs in the head supporting device facilitates the device to have increased **resistance** to **shock** and high rigidity. The housing and the head supporting device have reduce thickness. As a result the disk drive has superior **resistance** to **shock** and reduced thickness while eliminating the need for use of head retainer in the drive...

International Patent Class (Main): G11B-017/00 ...

... G11B-021/12 ...

... G11B-021/16 ...

... G11B-021/22 ...

... G11B-025/04 ...

... G11B-033/12

International Patent Class (Additional): G11B-005/48 ...

... G11B-005/73 ...

... G11B-005/82 ...

... G11B-019/20 ...

... G11B-021/02 ...

... G11B-021/20 ...

... G11B-021/21

15/3,K/17 (Item 9 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2006 The Thomson Corp. All rts. reserv.

014780684 **Image available**

WPI Acc No: 2002-601390/200265

Related WPI Acc No: 2003-815046; 2003-815088; 2004-413151

SRPX Acc No: N02-476747

Head supporting device in hard disk, has support arm that is provided with plate spring for imposing thrusting force towards recording media direction

Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (MATU); MATSUSHITA DENKI SANGYO KK (MATU); KUWAJIMA H (KUWA-I); MIYAMOTO M (MIYA-I); SAKAMOTO K (SAKA-I)

Inventor: KUWAJIMA H ; MIYAMOTO M; SAKAMOTO K

Number of Countries: 029 Number of Patents: 014

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1231598	A2	20020814	EP 20023370	A	20020213	200265 B
US 20020126419	A1	20020912	US 200275565	A	20020213	200267
JP 2002237160	A	20020823	JP 200134916	A	20010213	200271
JP 2002298523	A	20021011	JP 2001104108	A	20010403	200281
CN 1372264	A	20021002	CN 2002105059	A	20020211	200307
JP 3374846	B2	20030210	JP 200134916	A	20010213	200314
JP 3374849	B2	20030210	JP 2001104108	A	20010403	200314
JP 2003022637	A	20030124	JP 2001203600	A	20010704	200318
JP 3398736	B2	20030421	JP 2001203600	A	20010704	200328
US 6751064	B2	20040615	US 200275565	A	20020213	200439
CN 1495784	A	20040512	CN 2003101297	A	20020211	200452
CN 1495785	A	20040512	CN 2003101296	A	20020211	200452
EP 1231598	B1	20041124	EP 20023370	A	20020213	200477
			EP 200312630	A	20020213	
			EP 200312631	A	20020213	
			EP 20042222	A	20020213	
DE 60202006	E	20041230	DE 202006	A	20020213	200502
			EP 20023370	A	20020213	

Priority Applications (No Type Date): JP 2001203600 A 20010704; JP 200134916 A 20010213; JP 2001104108 A 20010403

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 1231598 A2 E 28 G11B-005/48

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

US 20020126419 A1 G11B-005/55

JP 2002237160 A 9 G11B-021/21

JP 2002298523 A 11 G11B-021/02

CN 1372264 A G11B-021/21

JP 3374846 B2 9 G11B-021/21 Previous Publ. patent JP 2002237160

JP 3374849 B2 10 G11B-021/21 Previous Publ. patent JP 2002298523

JP 2003022637 A 10 G11B-021/21
 JP 3398736 B2 9 G11B-021/21 Previous Publ. patent JP 2003022637
 US 6751064 B2 G11B-005/596
 CN 1495784 A G11B-021/16
 CN 1495785 A G11B-021/21
 EP 1231598 B1 E G11B-005/48 Related to application EP 200312630
 Related to application EP 200312631
 Related to application EP 20042222
 Related to patent EP 1349151
 Related to patent EP 1351220
 Related to patent EP 1418573

Designated States (Regional): DE FR GB
 DE 60202006 E G11B-005/48 Based on patent EP 1231598
 Inventor: KUWAJIMA H ...

Abstract (Basic):

... Facilitates an extremely high **resistance to shock**, high
 responsivity and capability of making high speed access, even if the
 shock is impressed...

International Patent Class (Main): G11B-005/48 ...

... G11B-005/55 ...

... G11B-005/596 ...

... G11B-021/02 ...

... G11B-021/16 ...

... G11B-021/21

International Patent Class (Additional): G11B-005/60

15/3,K/18 (Item 10 from file: 350)
 DIALOG(R)File 350:Derwent WPIX
 (c) 2006 The Thomson Corp. All rts. reserv.

012220742 **Image available**

WPI Acc No: 1999-026848/199903

XRPX Acc No: N99-020683

**Dynamic damper for use in disk recording and reproduction apparatus - has
 holder securing weight in dynamic damper onto substrate via viscoelastic
 elements, damper damps vibrations in frequency range lower than
 resonance frequency determined by spring constant of viscoelastic
 elements and mass of weight**

Patent Assignee: MATSUSHITA ELECTRIC IND CO LTD (MATU); MATSUSHITA DENKI
 SANGYO KK (MATU)

Inventor: KUWAJIMA H ; OKAMOTO H

Number of Countries: 027 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 884731	A2	19981216	EP 98110412	A	19980608	199903 B
JP 10339354	A	19981222	JP 97151191	A	19970609	199910
US 6178156	B1	20010123	US 9892401	A	19980605	200107
EP 884731	B1	20020904	EP 98110412	A	19980608	200266
DE 69807588	E	20021010	DE 607588	A	19980608	200274
			EP 98110412	A	19980608	

Priority Applications (No Type Date): JP 97151191 A 19970609

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 884731 A2 E 15 G11B-033/08

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
 LI LT LU LV MC MK NL PT RO SE SI

JP 10339354 A 8 F16F-015/08
US 6178156 B1 G11B-033/08
EP 884731 B1 E G11B-033/08
Designated States (Regional): DE FR GB
DE 69807588 E G11B-033/08 Based on patent EP 884731
... has holder securing weight in dynamic damper onto substrate via
viscoelastic elements, damper damps vibrations in frequency range
lower than resonance frequency determined by spring constant of
viscoelastic elements and...
Inventor: KUWAJIMA H ...

...Abstract (Basic): The damper is configured to damp vibration in a
frequency range lower than a resonance frequency determined by the
spring constant of...
...International Patent Class (Main): G11B-033/08
...International Patent Class (Additional): G11B-021/02

File 348:EUROPEAN PATENTS 1978-2006/ 200627
(c) 2006 European Patent Office
File 349:PCT FULLTEXT 1979-2006/UB=20060706,UT=20060629
(c) 2006 WIPO/Univentio

Set	Items	Description
S1	35146	(VIBRAT? OR SHOCK OR SEISMIC) (3N) (ABSORPTION OR ABSORB??? - OR DAMP? OR RESIST? OR CUSHION)
S2	27730	(ELECTRONIC() (DEVICE?? OR UNIT?? OR SYSTEM?? OR APPARATUS) OR (CD OR DVD OR (DIGITAL() VERSATILE OR COMPACT) () DISC?? OR D- ISK??) () (PLAYER?? OR UNITS OR SYSTEM??)
S3	447191	RESIN?? OR POLYETHYLENE
S4	732180	BUCKLE?? OR BUCKLING OR BEND??? OR MOMENT OR TOURQUE OR C- OMPRESS? OR DEFORM?
S5	57	AU= (KUWAJIMA, H? OR KUWAJIMA H?)
S6	250153	(CAPTUR? OR DIGITAL() VIDEO() STORAGE) (3N) DEVICE?? OR MEDIA
S7	292	S1(S) (S2 OR S6)
S8	60	S7(S) (S3 OR S4)
S9	8	S8 AND IC=G11B?
S10	0	S8 AND S5
S11	13	S1 AND S5
S12	3	S11(S) (S2:S4)
S13	3	S12 NOT S9

9/3,K/1 (Item 1 from file: 348)
DIALOG(R) File 348:EUROPEAN PATENTS
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01688821

Single reel tape cartridge with tape cartridge leader
Einspulenbandkassette mit Bandkassettenfuehrungsvorrichtung
Cassette a bande a bobine unique avec dispositif d'enfilage de bande de
cassette

PATENT ASSIGNEE:

QUANTUM CORPORATION, (567673), 501 Sycamore Drive, Milpitas, CA 95035,
(US), (Applicant designated States: all)

INVENTOR:

Kuhar, James J., 267 Greenway Circle Way, Broomfield Colorado 80020, (US)
Stamm, Stephen, 800 South Hoover Avenue, Fort Lupton Colorado 80621, (US)

LEGAL REPRESENTATIVE:

Charig, Raymond Julian et al (79692), Eric Potter Clarkson, Park View
House, 58 The Ropewalk, Nottingham NG1 5DD, (GB)

PATENT (CC, No, Kind, Date): EP 1385168 A2 040128 (Basic)

APPLICATION (CC, No, Date): EP 2003254368 030710;

PRIORITY (CC, No, Date): US 202661 020723

DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR;
HU; IE; IT; LI; LU; MC; NL; PT; RO; SE; SI; SK; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK

INTERNATIONAL PATENT CLASS (V7): G11B-023/107 ; G11B-023/26

ABSTRACT WORD COUNT: 148

NOTE:

Figure number on first page: 3a

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200405	1011
SPEC A	(English)	200405	4718
Total word count - document A			5729
Total word count - document B			0
Total word count - documents A + B			5729

INTERNATIONAL PATENT CLASS (V7): G11B-023/107 ...

... G11B-023/26

...SPECIFICATION the life of the leader 200 during normal operation, the leader stop 300 includes a **shock absorbing** material, namely bumpers 302 and 304. The bumpers, 302 and 304, are disposed in the...

...failure of the ears 214 and 216. Operationally, when the cartridge leader 200 is again **buckled** with the take-up leader 120, the take-up leader 120 spools the cartridge leader 200 and tape **media** 116 off of the hook member 306 in the direction (A) and onto the take-up reel 108. In this regard, the cartridge leader 200 and tape **media** 116 are pulled over the top of the hook member 306 out of the cartridge...

9/3,K/2 (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2006 European Patent Office. All rts. reserv.

01430040

Dynamic vibration absorber for a disk player
Dynamischer Schwingungsdämpfer für Platteneinheit
Amortisseur de vibrations dynamique pour unite a disque

PATENT ASSIGNEE:

SAMSUNG ELECTRONICS CO. LTD., (1093723), 416 Maetan-dong, Kwonsun-ku,
Suwon, Kyunggi-do, (KR), (Applicant designated States: all)

INVENTOR:

Park, Jun-min, 35-210 Jukong Apartment, Gaepo-1-dong, Kangnam-gu, Seoul,
(KR)

Lee, Young-won, 651-1607 Sinnamooshil Mijoo Apt, Youngtong-dong,
Paldal-gu, Suwon-city, Kyungki-do, (KR)

Seo, Young-sun, 208-806, LG Apt., Moojigae Maeul, Gumi-dong, Bundang-gu,
Sunghnam-city, Kyungki-do, (KR)

LEGAL REPRESENTATIVE:

Robinson, Ian Michael (79162), Appleyard Lees, 15 Clare Road, Halifax HX1
2HY, (GB)

PATENT (CC, No, Kind, Date): EP 1207532 A2 020522 (Basic)
EP 1207532 A3 030122

APPLICATION (CC, No, Date): EP 2001309162 011029;

PRIORITY (CC, No, Date): KR 2067766 001115

DESIGNATED STATES: DE; GB; NL

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS (V7): G11B-033/08

ABSTRACT WORD COUNT: 68

NOTE:

Figure number on first page: 2

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200221	1448
SPEC A	(English)	200221	4283
Total word count - document A			5731
Total word count - document B			0
Total word count - documents A + B			5731

INTERNATIONAL PATENT CLASS (V7): G11B-033/08

...SPECIFICATION in detail using FIGS. 7-10.

Figures 7 and 8 show the vibration feature of **disk players** with and without the dynamic **vibration absorber** of the present invention. Figure 7 is a graph measuring the frequency of a **deformed** wobble disk which has an RPM that increases from 0 to 10000 using the spindle...

...the deck plate 20. As shown in Figure 7, comparison example A1 lacks the dynamic **vibration absorber** and generates resonance around 60Hz with no influence of the deck plate 20 and the optical pickup 55. On the other hand, in experimental example A2, which has the dynamic **vibration absorber**, the resonance has been largely reduced around 60Hz. In other words, by a repeated reciprocal...

9/3,K/3 (Item 3 from file: 348)
DIALOG(R) File 348:EUROPEAN PATENTS
(c) 2006 European Patent Office. All rts. reserv.

00937326

Method of changing rotational rate of storage medium from initial rate to desired rate

Verfahren zur Änderung der Drehgeschwindigkeit eines Speichertragers von einer Anfangsgeschwindigkeit auf eine gewünschte Geschwindigkeit

Methode de changement de vitesse de rotation d'un support d'informations d'une vitesse initiale a une vitesse desiree

PATENT ASSIGNEE:

DISCOVISION ASSOCIATES, (260273), 2355 Main Street Suite 200, Irvine, CA 92714, (US), (Proprietor designated states: all)

INVENTOR:

Crupper, Randolph Scott, 308 High street, PO Box 731, Palmer Lake, Colorado 80133, (US)

Davis, Marvin Benjamin, 2813 Palmer Park Blvd., Colorado Springs, Colorado 80909, (US)

Getreuer, Kurt Walter, 115 Golden Hills Rd., Colorado Springs, Colorado 80919, (US)

Grassens, Leonardus Johannes, 19115 Pebble Beach Way, Monument, Colorado 80132, (US)

Lewis, David Earl, 14280 Spiritwood Loop, Black Forest, Colorado 80106, (US)

Schell, Davis Lewis, 5307 Borrego Drive, Colorado Springs, Colorado 80918, (US)

LEGAL REPRESENTATIVE:

Bazzichelli, Alfredo et al (40161), c/o Societa Italiana Brevetti S.p.A. Piazza di Pietra, 39, 00186 Roma, (IT)

PATENT (CC, No, Kind, Date): EP 852379 A2 980708 (Basic)
EP 852379 A3 000202
EP 852379 B1 031029

APPLICATION (CC, No, Date): EP 98101056 960118;

PRIORITY (CC, No, Date): US 376882 950125

DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; IE; IT; LI; NL; PT; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 726564 (EP 96300350)

INTERNATIONAL PATENT CLASS (V7): G11B-019/26 ; G11B-019/28

ABSTRACT WORD COUNT: 107

NOTE:

Figure number on first page: 5

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	199828	663
CLAIMS B	(English)	200344	618
CLAIMS B	(German)	200344	536
CLAIMS B	(French)	200344	674
SPEC A	(English)	199828	88273
SPEC B	(English)	200344	88916
Total word count - document A			88950
Total word count - document B			90744

Total word count - documents A + B 179694

INTERNATIONAL PATENT CLASS (V7): G11B-019/26 ...

... G11B-019/28

...SPECIFICATION providing mechanical isolation of the drive component. In this embodiment, the first means is a **shock absorbing** bumper and may be provided with at least one **compression** rib, and second means includes a housing that may be adapted to fit to an...

...group consisting of silicon rubber, polyurethane, and injection molded plastics. The first means also provides **shock absorption** and mechanical isolation in the form of the crash stop adapted to prevent a moveable...that the actuator 2-10 of the present invention could also be incorporated in optical **systems** having different orientations than those illustrated.

Focus Sensing Apparatus

Fig. 36 is a block diagrammatic...

9/3,K/4 (Item 4 from file: 348)

DIALOG(R) File 348:EUROPEAN PATENTS

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00795769

Optical information recording medium

Optisches Informationsaufzeichnungsmedium

Support d'enregistrement d'information optique

PATENT ASSIGNEE:

TAIYO YUDEN CO., LTD., (434452), 16-20, Ueno 6-chome, Taito-ku Tokyo 110, (JP), (Proprietor designated states: all)

INVENTOR:

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PATENT (CC, No, Kind, Date): EP 741383 A2 961106 (Basic)

EP 741383 A3 961120

EP 741383 B1 020703

APPLICATION (CC, No, Date): EP 96112240 890417;

PRIORITY (CC, No, Date): JP 88191715 880730; JP 88191716 880730; JP 897511 890114

DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; IT; LI; NL; SE

RELATED PARENT NUMBER(S) - PN (AN):

EP 353391 (EP 89106809)

INTERNATIONAL PATENT CLASS (V7): G11B-007/00 ; G11B-007/24

ABSTRACT WORD COUNT: 212

NOTE:

Figure number on first page: 3

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text Language Update Word Count

CLAIMS A (English) EPAB96 234

CLAIMS B	(English)	200227	215
CLAIMS B	(German)	200227	206
CLAIMS B	(French)	200227	240
SPEC A	(English)	EPAB96	3168
SPEC B	(English)	200227	3080
Total word count - document A			3403
Total word count - document B			3741
Total word count - documents A + B			7144

INTERNATIONAL PATENT CLASS (V7): G11B-007/00 ...

... G11B-007/24

...SPECIFICATION same as in Example 2.

In conventional information recording media, it is common that a **shock absorbing** portion such as a space is formed behind the information recordable layer so that when...

...recording layer absorbs a laser beam and generates heat and is thereby melted, evaporated, sublimed, **deformed** or modified, such thermal changes are **absorbed** by the above **shock absorbing** portion, whereby pits are formed to the recording layer itself. Whereas, the optical information recording...

...by forming the layers behind the light absorptive layer 2 with materials more hardly heat- **deformable** than the substrate 1, it is possible to employ a recording system wherein the thermal...

...SPECIFICATION recordable regions 7, were substantially the same as in Example 2.

In conventional information recording **media**, it is common that a **shock absorbing** portion such as a space is formed behind the information recordable layer so that when...

...recording layer absorbs a laser beam and generates heat and is thereby melted, evaporated, sublimed, **deformed** or modified, such thermal changes are **absorbed** by the above **shock absorbing** portion, whereby pits are formed to the recording layer itself. Whereas, the optical information recording...

...by forming the layers behind the light absorptive layer 2 with materials more hardly heat- **deformable** than the substrate 1, it is possible to employ a recording system wherein the thermal...

9/3,K/5 (Item 5 from file: 348)
 DIALOG(R) File 348:EUROPEAN PATENTS
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00341064

Optical information recording medium

Optisches Informationsaufzeichnungsmedium

Milieu optique d'enregistrement d'information

PATENT ASSIGNEE:

TAIYO YUDEN CO., LTD., (434452), 16-20, Ueno 6-chome, Taito-ku Tokyo 110,
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 AT;BE;CH;DE;ES;FR;GB;GR;IT;LI;NL;SE)

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 Munchen, (DE)
 PATENT (CC, No, Kind, Date): EP 353393 A2 900207 (Basic)
 EP 353393 A3 901003
 EP 353393 B1 950719
 APPLICATION (CC, No, Date): EP 89106811 890417;
 PRIORITY (CC, No, Date): JP 19171488 880730; JP 21447088 880829; JP
 23845688 880922; JP 23916388 880924; JP 23916488 880924; JP 23916688
 880924; JP 23916788 880924
 DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; GR; IT; LI; NL; SE
 INTERNATIONAL PATENT CLASS (V7): **G11B-007/00**
 ABSTRACT WORD COUNT: 110

LANGUAGE (Publication,Procedural,Application): English; English; English
 FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	9929	368
CLAIMS B	(German)	9929	291
CLAIMS B	(French)	9929	404
SPEC B	(English)	9929	17655
Total word count - document A			0
Total word count - document B			18718
Total word count - documents A + B			18718

INTERNATIONAL PATENT CLASS (V7): **G11B-007/00**

...SPECIFICATION ultraviolet curable resin was spin-coated and cured by
 irradiation with ultraviolet rays to form a **protective** layer 4 having
 a thickness of 10 (μ)m.

To the optical disc thus obtained...

...recorded in the same manner as in Example 1. Then, this optical disc was
 played **back** by the same CD player as used in Example 1, whereby the
reflectance of the optical disc was 75%, $I(1)/I(top)$ was 0.65, and
 $I(3)/I(top)$ was...

...butylindodicarbocyanine perchlorate as a cyanine dye dissolved in 10
 m(liters) of a methyl isobutyl **ketonesolvent**, was coated by spin
 coating to form a light absorptive layer 2 having a thickness...

9/3,K/6 (Item 6 from file: 348)
 DIALOG(R) File 348:EUROPEAN PATENTS
 (c) 2006 European Patent Office. All rts. reserv.

00341062
Optical information recording medium
Optisches Informationsaufzeichnungsmedium
Milieu optique d'enregistrement d'information
 PATENT ASSIGNEE:

TAIYO YUDEN CO., LTD., (434452), 16-20, Ueno 6-chome, Taito-ku Tokyo 110,
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PATENT (CC, No, Kind, Date): EP 353391 A2 900207 (Basic)
EP 353391 A3 900808
EP 353391 B1 970205

APPLICATION (CC, No, Date): EP 89106809 890417;

PRIORITY (CC, No, Date): JP 88191715 880730; JP 88191716 880730; JP 897511
890114

DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; GR; IT; LI; NL; SE

INTERNATIONAL PATENT CLASS (V7): G11B-007/00 ; G11B-007/24

ABSTRACT WORD COUNT: 123

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	319
CLAIMS B	(English)	EPAB97	335
CLAIMS B	(German)	EPAB97	285
CLAIMS B	(French)	EPAB97	363
SPEC A	(English)	EPABF1	3182
SPEC B	(English)	EPAB97	3185
Total word count - document A			3501
Total word count - document B			4168
Total word count - documents A + B			7669

INTERNATIONAL PATENT CLASS (V7): G11B-007/00 ...
... G11B-007/24

...SPECIFICATION same as in Example 2.
In conventional information recording media, it is common that a **shock absorbing** portion such as a space is formed behind the information recordable layer so that when...

...recording layer absorbs a laser beam and generates heat and is thereby melted, evaporated, sublimed, **deformed** or modified, such thermal changes are **absorbed** by the above **shock absorbing** portion, whereby pits are formed to the recording layer itself. Whereas, the optical information recording...

...by forming the layers behind the light absorptive layer 2 with materials more hardly heat- **deformable** than the substrate 1, it is possible to employ a recording system wherein the thermal...

...SPECIFICATION recordable regions 7, were substantially the same as in Example 2.
In conventional information recording **media** , it is common that a **shock absorbing** portion such as a space is formed behind the information recordable layer so that when...

...recording layer absorbs a laser beam and generates heat and is thereby melted, evaporated, sublimed, **deformed** or modified, such thermal changes are **absorbed** by the above **shock absorbing** portion, whereby pits are formed to the recording layer itself. Whereas, the optical information recording...

...by forming the layers behind the light absorptive layer 2 with materials more hardly heat- **deformable** than the substrate 1, it is possible to employ a recording system wherein the thermal...

9/3,K/7 (Item 7 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00270214

Carriage latch for a disc drive.

Schlittenverriegelung fur ein Plattenlaufwerk.

Verrouillage de chariot pour un entrainement de disque.

PATENT ASSIGNEE:

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AT;BE;CH;DE;ES;FR;GB;GR;IT;LI;LU;NL;SE)

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PATENT (CC, No, Kind, Date): EP 259127 A2 880309 (Basic)
EP 259127 A3 890315
EP 259127 B1 900502

APPLICATION (CC, No, Date): EP 87307676 870828;

PRIORITY (CC, No, Date): US 901678 860829

DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; GR; IT; LI; LU; NL; SE

INTERNATIONAL PATENT CLASS (V7): G11B-005/54 ; G11B-021/08 ; G11B-021/22
; G11B-021/02 ; G11B-005/40

ABSTRACT WORD COUNT: 167

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPABF1	651
SPEC B	(English)	EPABF1	2004
Total word count - document A			0
Total word count - document B			2655
Total word count - documents A + B			2655

INTERNATIONAL PATENT CLASS (V7): G11B-005/54 ...

... G11B-021/08 ...

... G11B-021/22 ...

... G11B-021/02 ...

... G11B-005/40

...CLAIMS a signal to withdraw said plunger from said first position to
said second position, and **shock absorbing** means comprising a
counterweight mechanically linked to said plunger for **absorbing** a
shock applied to said frame and pointing movement of said plunger
away from said first position in the absence of actuation of said
solenoid,
the mass **moment** of said counterweight being substantially
equal to the mass **moment** of said plunger about a pivot, whereby
shock loads fixed to said frame applied to...

9/3,K/8 (Item 8 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00242196

Magneto-optical recording medium.

Magneto-optischer Aufzeichnungsträger.

Support d'enregistrement magneto-optique.

PATENT ASSIGNEE:

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INVENTOR:

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PATENT (CC, No, Kind, Date): EP 245833 A2 871119 (Basic)
EP 245833 A3 881214
EP 245833 B1 911009

APPLICATION (CC, No, Date): EP 87106848 870512;

PRIORITY (CC, No, Date): JP 86108663 860514; JP 86308520 861226

DESIGNATED STATES: DE; FR; GB; NL

INTERNATIONAL PATENT CLASS (V7): G11B-011/10

ABSTRACT WORD COUNT: 44

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	252
CLAIMS B	(German)	EPBBF1	236
CLAIMS B	(French)	EPBBF1	263
SPEC B	(English)	EPBBF1	5718
Total word count - document A			0
Total word count - document B			6469
Total word count - documents A + B			6469

INTERNATIONAL PATENT CLASS (V7): G11B-011/10

...SPECIFICATION less is more preferable, since the light absorption thereof is 5% or less.

The recording media according to the present invention, i.e., the In/Sn-oxide recording medium and the...

...Ti recording medium are now described with regard to the magneto-optical layer, the synthetic resin - or plastic-substrate, the layer protecting a magneto-optical recording layer on the side thereof...

13/3,K/1 (Item 1 from file: 348)

DIALOG(R) File 348:EUROPEAN PATENTS

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01801781

Shock-absorbing member, shock-absorbing method of electronic device employing the member and electronic device adapting the member and the method

Stossdampfendes Element, Stossdampfendes Verfahren für eine elektronische Vorrichtung welches dieses Element benutzt, und für dieses Element und dieses Verfahren angepasste elektronische Vorrichtung

Element d'absorption de chocs, procédé d'absorption de chocs de dispositif électronique utilisant l'élément, et dispositif électronique adapté à cet élément a et ce procédé

PATENT ASSIGNEE:

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 Grunecker, Kinkeldey, Stockmair & Schwanhausser Anwaltssozietat (100721)
 , Maximilianstrasse 58, 80538 Munchen, (DE)
 PATENT (CC, No, Kind, Date): EP 1471534 A1 041027 (Basic)
 APPLICATION (CC, No, Date): EP 2004007845 040331;
 PRIORITY (CC, No, Date): JP 200394953 030331
 DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR;
 HU; IE; IT; LI; LU; MC; NL; PL; PT; RO; SE; SI; SK; TR
 EXTENDED DESIGNATED STATES: AL; LT; LV; MK
 INTERNATIONAL PATENT CLASS (V7): G11B-033/08
 ABSTRACT WORD COUNT: 160
 NOTE:
 Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English
 FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200444	1004
SPEC A	(English)	200444	6763
Total word count - document A			7767
Total word count - document B			0
Total word count - documents A + B			7767

...ABSTRACT A1

Shock - absorbing member 18, a **shock - absorbing** method and an electronic device employing the member are disclosed, wherein the **shock - absorbing** member prevents electronic equipment main body from receiving a large shock and avoids a fatal...

...subjected to substantially a large impact of dropping of the equipment for instance. More specifically, **shock absorbing** member 18 is formed by integrally molding **shock - absorbing** base part 18a of resin material having a flexibility but having a certain degree of hardness and formed into a thin plate, and highly soft **shock - absorbing** base part 18a having a cushion capability, into a unit having a certain degree of thickness, wherein **shock - absorbing** base part 18a is thinner than **shock - absorbing** flexible part 18b, wherein **shock - absorbing** base part 18a **bends** when receiving an impact, and start **absorbing** the **shock** by **buckling** at a **bending** part thereof. **Shock - absorbing** member 18 is disposed on and fixed to electronic equipment main body, constituting the invention.

...SPECIFICATION 10 (b) shows another example of the vibration-isolating mechanism, in which a plurality of **shock - absorbing** members which **absorbs vibration** and impact are placed between a disk drive and a case covering a disc drive container of the electronic equipment. In Fig. 10 (b), 3 pieces each of soft first- **shock - absorbing** divided into a small piece are affixed to sheet member 141 which is bonded to...

...of the face of sheet member 141 facing the case (not illustrated), and then second- **shock absorbing** member 412 which is harder than first- **shock - absorbing** -member 411 is placed between first- **shock - absorbing** -members 411. A thickness of newly attached **shock - absorbing** member 412 is set almost equal to a thickness where first- **shock - absorbing** member 411 loses its **shock - absorbing** effect **compressed** by an impact force. When a weak impact is applied, only soft first- **shock - absorbing** member 411 **absorbs** the **shock** , and when a strong impact is applied, hard second- **shock - absorbing** member 412 provided with an additional **shock absorbing** capability **absorbs** a **shock** which soft **shock -**

absorbing -member 411 is unable to absorb with its capability, therewith two stages absorption construction is established. In this example, both of the **shock - absorbing** members **absorb** respective **shock** by elastically **deforming** . It is therefore assumed that this construction effectively responds to a wide range of impact from a weak impact to a strong impact.

However, with the above conventional **shock - absorbing** member and **shock - absorbing** method, when **shock - absorbing** member 62 made of a single material as shown in Fig. 9 is used, and...

...dropping impact for instance reaching 10,000G or higher is applied, a thickness of every **shock - absorbing** member 62 has to be large enough for efficiently alleviating the impact and protecting electronic device main body 61 from fatal damage. Notwithstanding, if the thickness of **shock - absorbing** member 62 is increased, although **shock - absorbing** capability of **shock - absorbing** member 62 becomes high enough at an initial stage of receiving an impact, **deformation** of **shock - absorbing** member 62 is rapidly progressed and resilient restoring power of **shock - absorbing** member 62 rapidly progresses, and as a result, the **shock - absorbing** capability is swiftly decreased and the **shock - absorbing** capability of the member is dropped, causing the device subjected to a great shock in...

...a task is left. There also is another problem left that increasing the thickness of **shock - absorbing** member 62 makes the size of electronic device 72 larger, making it hard for the device to realize further miniaturization.

The problem of above mentioned single material **shock - absorbing** member remains in a constitution in which a plurality of **shock - absorbing** members are combined and used, i.e., even if a plurality of **shock - absorbing** member having a different temperature characteristic are combined and used as in Fig 10 (a), because the problem is irrelevant to temperature. Namely, even if the thickness of the **shock - absorbing** member is increased against a large dropping impact amounting to 10,000G or above, although the **shock - absorbing** capability becomes high at the initial stage of receiving the impact, the **shock - absorbing** member is rapidly **deformed** , and loses its resiliency restoring capability therefore a **shock - absorbing** capability of the member is lowered, as a result, the device is subjected to receiving...

...been difficult for them to cope with a very large impact. If the soft first **shock - absorbing** member and the second **shock - absorbing** member that is harder than the first member are combined and used as in case...

...it may be considered that the united member is more effective than the single member **shock - absorbing** member in alleviating the impact. However, if substantially a large dropping impact reaching 10,000G or above is applied, even if the hard second- **shock - absorbing** -member is used, as long as it is used for **absorbing** the **shock** only with its elasticity **deforming** resistivity, it has to be assumed that it will be difficult for the united member...

...a large impact by dropping or the like.

In order to achieve above objective, the **shock - absorbing** member in the present invention, which is placed around the main body of the device, is composed of a **shock - absorbing** base part and a **shock - absorbing** flexible part, and in which the **shock - absorbing** base part is made thinner than the **shock - absorbing** flexible part. When the **shock - absorbing** base receives a **shock** , the base part first starts **bending** by **absorbing** the **shock** , in this case the **shock - absorbing** base part forms a **bending** part which is vertical to the shock direction, and starts **buckling** at the **bending** part of the **shock -**

absorbing base part so as to absorb a shock when receiving an impact. The member is so constituted that longer sides of the shock - absorbing base part and the shock - absorbing flexible part are directed substantially in parallel with a direction in which an impact force is applied, that the shock - absorbing base part and the shock - absorbing flexible part are integrally composed forming a unit, that the shock - absorbing base part is narrower in its effective width of the bending part in vertical to the direction of the length, that the shock - absorbing base part is thinner in a direction of its effective thickness which is vertical to long side of the shock - absorbing base part, and that the shock - absorbing base part is harder than the shock - absorbing flexible part.

With these constitutions, the shock - absorbing member is constituted as to endure a compressional force of impact for comparatively a longer period of time, to display its shock - absorbing capability fully when receiving a very large shock such as of dropping of the device in portable use. Used in electronic equipment, the shock - absorbing member prevents a main body of the equipment from being applied a large impact force and avoids a fatal damage to the equipment.

In order to achieve above objective, the shock - absorbing method of electronic devices of this invention includes, in the shock - absorbing method of the electronic device utilizing the shock absorbing member made by integrally molding the shock - absorbing base part and the shock - absorbing flexible part, a process of making the shock - absorbing member to start buckling at its bending part, as well as the process of making the thickness of the shock - absorbing base part smaller than that of the shock - absorbing flexible part thereby having the shock - absorbing base part to absorb the shock first by bending when receiving an impact. The method thereby includes a process having the shock - absorbing flexible part to mainly absorb the shock after the shock - absorbing base part is buckled at a bending part which is vertical to the shock direction so as to absorb the shock. With these processes, the obtained shock - absorbing method enables the electronic device to sustain a compressional force for comparatively a long time when receiving a large impact at its portable use, thereby preventing the electronic device from receiving a fatal damage.

In addition to above, the shock - absorbing method of the electronic device of this invention includes a process, in which a joint plane of the shock - absorbing base part and the shock - absorbing flexible part of the shock - absorbing members placed adjacent to a plane to which a main body of a device and...

...at least and 120(degree) at most. With this process, much preferable disposition of the shock - absorbing member is realized so that the shock - absorbing member receiving a shock buckles in near center of the shock - absorbing base part, making it possible for the shock - absorbing method sufficiently to display the shock - absorbing characteristic.

In order to achieve the objective of this invention, the electronic device of the present invention further includes following constitutions. In the shock - absorbing member which is placed outside of the main body of the device and which is composed of the shock - absorbing base part and shock - absorbing flexible part, the thickness of the shock - absorbing base part is thinner than that of the shock - absorbing flexible part; the bending of the shock - absorbing part of the shock - absorbing base part is followed by buckling of the part; the longer sides of the shock - absorbing member of the shock - absorbing base part and the shock - absorbing flexible part are directed substantially in parallel with a direction in which the impact force is applied. The shock - absorbing member used here is made by integrally molding the shock - absorbing base part and the shock - absorbing flexible. In the shock - absorbing member, the bending part in

vertical to the long sides of the **shock - absorbing** base part is narrower in effective width. In the **shock - absorbing** member, the **bending** part in vertical to the long sides of the **shock - absorbing** base part is thinner in effective thickness. In the **shock - absorbing** member, the **shock - absorbing** base part is harder than the **shock - absorbing** flexible part. At least three pieces of **shock - absorbing** members are placed between the plane to which the main body of the device and the outer member face. The **shock - absorbing** member is placed between the plane to which the main body of the device and the outer member face, and the joint plane of the **shock - absorbing** base part and the **shock - absorbing** flexible part of the **shock - absorbing** member placed adjacent to the plane to which the main body of the device and...

...angled to the joint plane 60(degree) at least and 120(degree) at most. The **shock - absorbing** member is affixed to one of the outside face of the main body of the device and the inside face the outer case. The **shock - absorbing** member is in one of shapes of cuboid, cylinder, half-cylinder, oval cylinder, half-oval cylinder, and polygonal prism, and the plane of the **shock - absorbing** member having the **shock - absorbing** base part is in parallel with the joint plane. The plane of the **shock - absorbing** member having the **shock - absorbing** base part is on a boundary of the **shock - absorbing** member, and an outside peripheral diameter or an outside perimeter of the **shock - absorbing** base part is smaller than half of an outside peripheral diameter or an outside perimeter of the **shock - absorbing** member

Because the electronic device of the present invention is manufactured in accordance with above...

...18 may be directly fixed to substrate 9 which is turned at the end.

Next, **shock absorbing** member 18 is explained using Fig. 2. Fig. 2 (a) is a perspective view of **shock absorbing** member 18, and Fig. 2 (b) is a side view of the **shock - absorbing** member showing **shock absorbing** process of the member. **Shock - absorbing** member 18 in Fig. 2 (a) is prepared with a commercially available **shock - absorbing** material used as a **shock - absorbing** sheet and cut into a specified size. As the **shock - absorbing** sheet, a composite member of **shock - absorbing** base part 18a, a thin plate sheet of a flexible **resin** material provided with a certain level of hardness such as **polyethylene**, and a **shock absorbing** flexible part 18b, a very flexible material provided with a cushioning effect, integrally molded one...

...19 and the outside face of magnetic disk drive main body 17.

In this way, **shock - absorbing** member 18 is formed by integrally molding **shock - absorbing** base part 18a having a certain level of hardness, and **shock absorbing** flexible part 18b very flexible and having a cushioning capability, and **shock absorbing** base part 18a and **shock absorbing** flexible part 18b both receive a shock in parallel fashion in this constitution. The thickness of the **shock absorbing** portion of the **shock absorbing** member 18 (that is, distance between end face 21 and end face 22 of **shock - absorbing** member 18) is formed into a proper size. With this constitution, when receiving a great impact, although both the **shock absorbing** base part 18a having a certain level of hardness and the **shock absorbing** flexible part 18b having a cushion effect receive the initial shock in parallel fashion, **shock absorbing** base part 18a particularly **absorbs** the **shock**, then **shock absorbing** base part 18a **bends** at middle part 181 in around a middle part of **shock - absorbing** base part 18a, and then **shock - absorbing** part 18a **buckles** at its **bending** part near middle part 181 absorbing the load of the impact as it becomes unable to sustain the **compressional** force, as is illustrated in Fig. 2(b) a Subsequently, as a repulsive force of **shock - absorbing** 18a becomes gradually small, **shock - absorbing** flexible part 18b mainly absorbs the **compressional** force afterwards. **Shock absorbing** base part 18a can be constituted putting **shock - absorbing** base part 18a having a certain level of

hardness between two flexible parts having a **cushion** effect, **shock - absorbing** flexible parts 18b and 18c, as shown in Fig. 2 (c).

Fig. 3 is a drawing schematically illustrating working mechanism of a **shock - absorbing** member of an electronic device in the preferred embodiment of the present invention. In Fig...

...15 (or can be lower inner case 16) are disposed in parallel. In the illustration, **shock - absorbing** member 18 is regarded as a hard material linking middle part 181 of **shock - absorbing** base part 18, and is represented by a thick solid line. **Shock - absorbing** flexible part 18b is diagrammatically illustrate by a spring. In Fig. 3 (b), change of load of impact F applied to **shock - absorbing** member 18 and changing ratio P of **shock - absorbing** capability of **shock - absorbing** member 18, are graphed for a lapse of time. If substantially a large impact force...

...is applied to outer case 19 of equipment such as by dropping of it, both **shock - absorbing** base part 18a and **shock - absorbing** flexible part 18b elastically **deforms** at an initial stage of the impact, therefore P the changing ratio of **shock - absorbing** capability per time keeps changing almost along the line F of load of impact until...

...3 (b). When impact load F continues increasing, exceeding a marginal point of linear elastic **deformation** line, **shock - absorbing** base part 18a a hard material starts **bending** at middle part 181 showing warping **deformation**. These phenomena can be considered that **shock - absorbing** base part 18a is **deforming** like **bending** at middle part 181, making the part a linking point. In this state of warping **deformation**, P the changing ratio of **shock - absorbing** capability per time transits ...as to exceed the limit the bending marginal point by the warping deformation of the **shock - absorbing** base part 18a, the **shock - absorbing** base part can no more sustains the **compressional** force and **buckles** at the **bending** part near the middle part 181, namely, **shock - absorbing** part 18a **bends** near middle part 181 absorbing the load of the impact, as shown in Fig. 2 (b). (This is considered to be a state where **shock - absorbing** base part 18a is **deformed** being bent at linking middle part 181, as shown in right side figure in Fig. 3 (a). At this time, **shock - absorbing** member 18 is **deformed** by an amount of **deformation** (delta).) Subsequently, since the repulsive force of **shock - absorbing** base part 18a to the impact gradually diminishes and **shock - absorbing** flexible part 18b having cushion effect instead mainly absorbs the impact force, the changing ratio P of **shock - absorbing** capability gradually diminishes shifting over to right side of V in Fig. 3 (b). The situation in that the impact load F is applied to **shock - absorbing** member 18 and the changing ratio of **shock - absorbing** capability per time P moves from U to V is explained by the following analogy...

...P from U to V in Fig. 3 (b).

As it has been explained, the **shock - absorbing** member in the exemplary embodiment of the present invention is constituted by an integrated unit of the **shock - absorbing** base part composed of a material having a certain degree of hardness and a flexibility and the **shock - absorbing** flexible part composed of a very flexible material having a cushion absorbing capability into a unit, and when a large impact is applied, the **shock - absorbing** member **absorbs** the impact force by **bending** the **shock - absorbing** base part at the middle part and **buckling** it at the **bending** part of it, **absorbing** the **shock** of the impact. In order to have the **shock - absorbing** base part **buckle** without failing at its middle part upon receipt of substantially a large impact, the **shock - absorbing** base part may be provided with. a hole, a cut, or a notch.

For examples...

- ...the base part with hole 182 in shape of hole in the middle part of **shock - absorbing** base part 18a of **shock - absorbing** member 18, as shown in Fig. 4 (a). In order to ensure the **buckling**, it is also possible to provide cut 183 in a wedge shape in the middle part of **shock - absorbing** base part 18a of **shock - absorbing** member 18 in vertical direction to the longer sides of the member, as shown in...
- ...as well as providing notch 184 in a semicircle shape in the middle part of **shock - absorbing** base part 18a of **shock - absorbing** member 18, as shown in Fig. 4 (c). Such **shock - absorbing** member 18 can also be constituted by putting **shock - absorbing** flexible part 18b having a **cushion** effect between two **shock - absorbing** base parts 18a having a certain degree of hardness and provided with hole 182 in...
- ...as is shown in Fig. 4 (d). In this case, both of two pieces of **shock - absorbing** base parts 18a may have a cut or a notch. Shape of the hole, of...

- ...cylindrical in its cross section and a notch in triangular are allowed.

In Fig. 1, **shock absorbing** members 18 fitted to surfaces of magnetic disk drive main body 17 are shown in which the joint planes of the **shock - absorbing** member which is made integrally molding **shock absorbing** base part 18a and **shock absorbing** flexible part 18b are positioned in parallel each other, however disposition of the member is not limited to this configuration. For examples, a plurality of **shock absorbing** members 18 can be arranged so as at least one joint plane of **shock - absorbing** members 18 integrally made by molding **shock - absorbing** base part 18a and **shock - absorbing** flexible part 18b may be nearly vertical to or in an angle of 60(degree) to 120(degree) to one of the other joint plane of adjacent **shock - absorbing** members, which is shown in Fig. 5. In the arrangement of **shock absorbing** members 18 shown in Fig. 1, when an impact force having a component force is applied practically in a vertical direction to the integrally molded mating face of **shock absorbing** base part 18a and **shock absorbing** flexible part 18b, or when **shock - absorbing** base part 18a of **shock - absorbing** member 18 is not vertically abutted onto magnetic disk drive main body 17, there is a possibility that **shock - absorbing** member 18 receiving the impact force does not **buckle** in near the middle part of **shock absorbing** base part 18a, the **shock absorbing** member 18 becomes like falling down unable to fully exhibit its **shock absorbing** capability. However, by using the arrangement of **shock absorbing** members 18 shown in Fig. 5, such state like falling down of the **shock absorbing** member 18 is prevented from occurring because **shock - absorbing** member 18 **buckles** in the near middle of the **shock absorbing** base part 18a, proving a preferable arrangement of the members which exhibits the **shock absorbing** capability. The number of **shock absorbing** member 18 fitted to a surface is not limited to three or four pieces, but preferably at least three **shock absorbing** members 18 are attached as shown in Fig. 5.

Next, effects of the **shock absorbing** member are described by showing experimental results. Two kinds of **shock - absorbing** members having a different constitution were prepared for the experiment. One is a **shock - absorbing** member 42 in conventional constitution, in which **shock - absorbing** base part 42a of **shock absorbing** member 42 is bonded to one of an outside surface of magnetic disk drive main body (dummy unit 41) and an inside surface of outer case (stand 43), and **shock absorbing** member 42b is bonded to the other surface, so that the **shock absorbing** base part 42a and **shock absorbing** flexible part 42b are disposed in series. Another is **shock absorbing** member 47 in the preferred embodiment of the present invention, in which **shock - absorbing** base part 47a and **shock - absorbing** flexible part 47b are

disposed in parallel. These constitutions are shown in Fig. 6. Differences of **shock - absorption** in the two constitutions were examined, and obtained results are shown in Fig. 7.

Fig...

...disk drive main body.

In Fig. 7, the curve B, which represents the change of **shock absorption** of the **shock absorbing** members 42 in time in the conventional constitution, shows in Fig. 6 (a) that **shock absorbing** capability of flexible part 42b effectively exerts its **shock absorbing** capability in the beginning stage of receiving shocks showing its **shock absorbing** capability in early stage, however, since the impact force is very large, the **shock absorbing** flexible part 42b is greatly **deformed** by the impact and increases its resilient repulsing force with lapse of time, therefore value...

...corresponding to a magnetic disk drive main body receives is increased. Finally, state of the **shock - absorption** becomes almost identical to that of a rigidity contact (so-called "bottoming"), and most of the **shock absorbing** capability is lost. On the other hand, in the constitution in the preferred embodiment of...

...present invention where absorbing members 47 are arranged as in case of Fig. 6 (b), **shock absorbing** base part 47a and **shock absorbing** flexible part 47b receive a shock in parallel at the initial stage of receiving the impact, and **shock - absorbing** base part 47a mainly exhibits its elastic repulsive force against the impact. As value G of the impact increases, **shock absorbing** base part 47a is **buckled** unable to endure the **compressive** force and lose its elastic repulsive force, then **shock absorbing** flexible part 47b starts receiving the **compressional** force in placing of **shock absorbing** base part 47a, as graphed by curve C in Fig. 7. Thus, in this constitution, the **compressional** force is received for a longer period of time, therefore the **shock absorbing** effect of this method is proved to be greater than that of the conventional **shock absorbing** method in which **shock absorbing** members 42 are used in series.

In Fig. 7, the curve A shows that the...

...obtained regardless the direction of the impact.

In the above description and the drawing, the **shock absorbing** member in cuboid shape is explained as an example. However, the shape of the **shock absorbing** member of the present invention is not limited to the cuboid shape, and **shock - absorbing** member in various shape can be used, in shape such as of cylinder, half-cylinder, oval cylinder, half-oval cylinder, and polygonal prism shown in Fig. 8. Such **shock - absorbing** members can be composed integrally molding or bonding a **shock absorbing** flexible part - a highly soft material having a cushion capability and formed into a relatively...

...shapes of cylinder, half-cylinder, oval cylinder, half-oval cylinder, and polygonal prism, and a **shock absorbing** base part - a thin-plate sheet made from **resin** material having a certain level of hardness and flexibility, such as **polyethylene**, and cutting into a certain size of width and thickness. When manufacturing the **shock - absorbing** member, it is preferable that the **shock - absorbing** base part is bonded to a portion in less than half of peripheral diameter or perimeter of the **shock absorbing** flexible part. In Fig. 8, three pieces or four pieces of **shock absorbing** members in different shape are arranged as examples to be disposed a main body of...

...be used as portable equipment.

If an extremely large impact load is applied as the **shock - absorbing** base part of the **shock - absorbing** member has to **buckle** for **absorbing** the impact, the **shock - absorbing** capability of the **shock - absorbing** member becomes insufficient. In case of it, it is advisable a

sensor detecting **buckling** of a **shock - absorbing** member is attached to the **shock - absorbing** member. A countermeasure is taken by equipping electronic equipment with a displaying system which urges replacement of the **shock - absorbing** member based on the signal indicating the **buckle** of the member.

As described above, the **shock - absorbing** method and the electronic device using the method are realized in the preferred embodiment of the present invention. In the method, the electronic device is enabled to have a smaller **shock - absorbing** effect but relatively a larger shock-repulsive power at an initial stage of receiving the impact, a larger shock repulsive power but smaller **shock - absorbing** effect after a lapse of specified time period, thereby the electronic device is enabled to receive a **compressional** force for relatively a long period of time, when subjected to a great impact such...

...any harsh impact, the device is prevented from getting a serious damage, and an outstanding **shock absorbing** capability is provided.

EXPLANATION OF INDUSTRIAL APPLICABILITY OF INVENTION

As described above, the present invention comprises a **shock - absorbing** member, a **shock absorbing** method and an electronic equipment utilizing those. The **shock - absorbing** member is composed of a **shock absorbing** base part and a **shock - absorbing** flexible part, in which thickness of the **shock - absorbing** base part is smaller than that of the **shock - absorbing** flexible part and the **shock - absorbing** base part **buckles** at its **bending** part when receiving an impact. A plurality of such **shock - absorbing** members is disposed between an electronic device main body and an outer case, or at least three pieces of the **shock - absorbing** members are placed between faces of an outside of the electronic device main body and an inside of the outer case.

The invention realizes a large effect by providing a **shock - absorbing** member having a superb **shock - absorbing** capability which, even when subjected to a very large impact, endures a **compressional** force substantially a long period of time, helps to decrease the impact the main body...

...one, and avoids a serious damage to the main body of electronic equipment; and a **shock - absorbing** method of electronic equipment utilizing the member.

The electronic equipment employing the **shock - absorbing** member and the **shock - absorbing** method is provided with a large **shock - absorbing** capability. The main body of equipment is prevented from receiving a large **compressional** force, and is avoided from a fatal damage is caused.

Reference marks in the drawings...

...CLAIMS A1

1. A **shock - absorbing** member disposed on a main body of equipment, and comprising a **shock - absorbing** base part and a **shock - absorbing** flexible part,

wherein the **shock - absorbing** base part has a thickness smaller than that of the **shock - absorbing** flexible part, and the **shock - absorbing** base part **buckles** so as to **absorb** a **shock** when receiving an impact.

2. The **shock - absorbing** member according to claim 1, wherein the **shock - absorbing** base part forms a **bending** part which is vertical to the shock direction, and starts **buckling** at the **bending** part of the **shock - absorbing** base part so as to **absorb** a **shock** when receiving an impact.
3. The shock-absorbing member according to claim 1, wherein the...

...higher than that of the shock-absorbing flexible part.

8. An electronic device having a **shock - absorbing** member which is composed of a **shock - absorbing** base part and a **shock - absorbing** flexible part and is disposed outside a main body of the device, wherein the **shock - absorbing** base part has a thickness smaller than that of the **shock - absorbing** flexible part, and the **shock - absorbing** base part **buckles** so as to **absorb** a **shock** when receiving a shock of impact.
9. The electronic device according to claim 8, wherein the **shock - absorbing** base part forms a **bending** part which is vertical to the shock direction, and starts **buckling** at the **bending** part of the **shock - absorbing** base part so as to **absorb** a **shock** when receiving an impact.
10. The electronic device according to claim 8, wherein a long...

...face is smaller than half an outside peripheral diameter or an outside perimeter of the **shock - absorbing** member.

20. A **shock - absorbing** method of an electronic device including a **shock - absorbing** member formed by integrally molding a **shock - absorbing** base part and the **shock - absorbing** flexible part, wherein the **shock - absorbing** base part is thinner than the **shock - absorbing** flexible part, and the **shock - absorbing** base part **buckles** so as to **absorb** a **shock** when receiving an impact.
21. The **shock - absorbing** method according to claim 20, wherein the **shock - absorbing** base part forms a **bending** part which is vertical to the shock direction, and starts **buckling** at the **bending** part of the **shock - absorbing** base part so as to **absorb** a **shock** when receiving an impact.
22. The **shock - absorbing** method of an electronic device according to claim 20 or claim 21,

wherein, when the **shock - absorbing** member **absorbs** the **shock** of the impact by **buckling** the **shock - absorbing** base part, the **shock - absorbing** base part **bucks** and **absorbs** the **shock** of the impact at an initial stage of receiving the impact, then the **shock - absorbing** flexible part mainly **absorbs** the **shock**.

23. The **shock - absorbing** method of an electronic device according to claim 18 or claim 21,

wherein the shock...

13/3,K/2 (Item 2 from file: 348)

DIALOG(R) File 348:EUROPEAN PATENTS

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01789092

Head support device and disk drive using the same

Kopftrageranordnung und Plattenlaufwerk dieses benutzend

Dispositif de support d'une tete et disque-dur utilisant ce support

PATENT ASSIGNEE:

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PATENT (CC, No, Kind, Date): EP 1460616 A1 040922 (Basic)
 EP 1460616 A1 040922
 APPLICATION (CC, No, Date): EP 2004004254 040225;
 PRIORITY (CC, No, Date): JP 200378033 030320
 DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR;
 HU; IE; IT; LI; LU; MC; NL; PT; RO; SE; SI; SK; TR
 EXTENDED DESIGNATED STATES: AL; LT; LV; MK
 INTERNATIONAL PATENT CLASS (V7): G11B-005/48; G11B-005/60
 ABSTRACT WORD COUNT: 7571

NOTE:

Figure number on first page: NONE

LANGUAGE (Publication,Procedural,Application): English; English; English
 FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200439	721
SPEC A	(English)	200439	6233
Total word count - document A			6954
Total word count - document B			0
Total word count - documents A + B			6954

...SPECIFICATION at two pivot fulcrums 45b provided in both sides of width direction can improve the **shock resistance** and stability for twisting effectively. In the structure shown in FIG. 4, head suspension 42...

13/3,K/3 (Item 3 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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01674580

Magnetic head apparatus, magnetic head supporting mechanism and magnetic recording apparatus

Magnetkopfverfahren, Magnetkopfbefestigungsmechanismus und magnetisches Aufnahmegerat

Tete magnetique, support pour tete magnetique et appareil d'enregistrement magnetique

PATENT ASSIGNEE:

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PATENT (CC, No, Kind, Date): EP 1376544 A1 040102 (Basic)

APPLICATION (CC, No, Date): EP 2003014757 030627;

PRIORITY (CC, No, Date): JP 2002190343 020628

DESIGNATED STATES: DE; FR; GB

EXTENDED DESIGNATED STATES: AL; LT; LV; MK

INTERNATIONAL PATENT CLASS (V7): G11B-005/48

ABSTRACT WORD COUNT: 136

NOTE:

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200401	1254
SPEC A	(English)	200401	6795
Total word count - document A			8049
Total word count - document B			0
Total word count - documents A + B			8049

...SPECIFICATION shown in Fig. 9. In addition, if the dead weight 62 is made of a **vibration** damping member (or **damper**), it is possible to reduce the peak value of resonance with respect to the magnetic...

File 9:Business & Industry(R) Jul/1994-2006/Jul 07
(c) 2006 The Gale Group

File 15:ABI/Inform(R) 1971-2006/Jul 10
(c) 2006 ProQuest Info&Learning

File 16:Gale Group PROMT(R) 1990-2006/Jul 07
(c) 2006 The Gale Group

File 20:Dialog Global Reporter 1997-2006/Jul 10
(c) 2006 Dialog

File 47:Gale Group Magazine DB(TM) 1959-2006/Jul 06
(c) 2006 The Gale group

File 75:TGG Management Contents(R) 86-2006/Jul W1
(c) 2006 The Gale Group

File 80:TGG Aerospace/Def.Mkts(R) 1982-2006/Jul 07
(c) 2006 The Gale Group

File 88:Gale Group Business A.R.T.S. 1976-2006/Jun 28
(c) 2006 The Gale Group

File 98:General Sci Abs 1984-2005/Jan
(c) 2006 The HW Wilson Co.

File 112:UBM Industry News 1998-2004/Jan 27
(c) 2004 United Business Media

File 160:Gale Group PROMT(R) 1972-1989
(c) 1999 The Gale Group

File 275:Gale Group Computer DB(TM) 1983-2006/Jul 07
(c) 2006 The Gale Group

File 264:DIALOG Defense Newsletters 1989-2006/Jul 07
(c) 2006 Dialog

File 484:Periodical Abs Plustext 1986-2006/Jul W1
(c) 2006 ProQuest

File 553:Wilson Bus. Abs. 1982-2006/Jul
(c) 2006 The HW Wilson Co

File 570:Gale Group MARS(R) 1984-2006/Jul 07
(c) 2006 The Gale Group

File 620:EIU:Viewswire 2006/Jul 08
(c) 2006 Economist Intelligence Unit

File 621:Gale Group New Prod.Annou.(R) 1985-2006/Jul 06
(c) 2006 The Gale Group

File 623:Business Week 1985-2006/Jul 07
(c) 2006 The McGraw-Hill Companies Inc

File 624:McGraw-Hill Publications 1985-2006/Jul 07
(c) 2006 McGraw-Hill Co. Inc

File 634:San Jose Mercury Jun 1985-2006/Jul 07
(c) 2006 San Jose Mercury News

File 635:Business Dateline(R) 1985-2006/Jul 08
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File 636:Gale Group Newsletter DB(TM) 1987-2006/Jul 07
(c) 2006 The Gale Group

File 647:CMP Computer Fulltext 1988-2006/Aug W2
(c) 2006 CMP Media, LLC

File 696:DIALOG Telecom. Newsletters 1995-2006/Jul 05
(c) 2006 Dialog

File 674:Computer News Fulltext 1989-2006/Jul W1
(c) 2006 IDG Communications

File 810:Business Wire 1986-1999/Feb 28
(c) 1999 Business Wire

File 813:PR Newswire 1987-1999/Apr 30
(c) 1999 PR Newswire Association Inc

File 587:Jane`s Defense&Aerospace 2006/Jul W1
(c) 2006 Jane`s Information Group

Set	Items	Description
S1	56660	(VIBRAT? OR SHOCK OR SEISMIC) (3N) (ABSORPTION OR ABSORB??? - OR DAMP? OR RESIST? OR CUSHION)
S2	319442	(ELECTRONIC() (DEVICE?? OR UNIT?? OR SYSTEM?? OR APPARATUS)

OR (CD OR DVD OR (DIGITAL()VERSATILE OR COMPACT)())DISC?? OR D-
ISK??))() (PLAYER?? OR UNITS OR SYSTEM??)

S3 537957 RESIN?? OR POLYETHYLENE
S4 3262078 BUCKLE?? OR BUCKLING OR BEND??? OR MOMENT OR TOURQUE OR C-
OMPRESS? OR DEFORM?
S5 3 AU=(KUWAJIMA, H? OR KUWAJIMA H?)
S6 7760768 (CAPTUR? OR DIGITAL()VIDEO()STORAGE) (3N)DEVICE?? OR MEDIA
S7 907 S1(S) (S2 OR S6)
S8 5 S7(3N) (S3 OR S4)
S9 0 S7 AND S5
S10 2 S5 NOT PY>2003

8/3,K/1 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2006 The Gale Group. All rts. reserv.

07689839 Supplier Number: 63976776 (USE FORMAT 7 FOR FULLTEXT)
Applications upgrading mills for improved operation.
Associates, Lawrence R. Gooch Gooch Engineering
Rubber & Plastics News, v30, n1, p21
August 7, 2000
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 3462

... iron has proven a remarkably well-suited choice of material. It is tough, strong in **compression** and **dampens vibration** well. It can be made in almost any shape, dependent upon only the skill of...

8/3,K/2 (Item 1 from file: 20)
DIALOG(R)File 20:Dialog Global Reporter
(c) 2006 Dialog. All rts. reserv.

46518341 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Macworld Conference & Expo 2006 Exhibitor Profiles
BUSINESS WIRE
January 10, 2006
JOURNAL CODE: WBWE LANGUAGE: English RECORD TYPE: FULLTEXT
WORD COUNT: 6753

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... developed since November 2004 exclusively for the Mac community.
Company: PumpPod, LLC Booth/Stand: 951 **Media** Contact/Email: Lance
Buckley ; 212.789.1063; lance@piercemattie.com Investor Relations
Contact/Email: Craig Schlossberg, President; 212-982...

8/3,K/3 (Item 1 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
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01101742
Superalloys: technology: Ceramic foam proves effective.
AMERICAN METAL MARKET November 8, 1984 p. 19a1

... recently have been developed that resist crumbling due to handling, resist spalling due to thermal **shock**, and **resist creep deformation** under the load of metal flowing up to 1,700C.

8/3,K/4 (Item 1 from file: 275)

DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2006 The Gale Group. All rts. reserv.

01101037 SUPPLIER NUMBER: 00662700
Ensuring Media Reliability and Data Integrity.
DeStefano, J.V.
Systems & Software, v3, n2, p163
Feb., 1984
DOCUMENT TYPE: evaluation ISSN: 0039-8047 LANGUAGE: ENGLISH
RECORD TYPE: ABSTRACT

...ABSTRACT: over a semi-rigid jacket with a metal shutter, one being that the jacket and **media** **bend** together without damage to the media. Dysan also incorporates data integrity from static discharge by...

8/3,K/5 (Item 1 from file: 587)
DIALOG(R)File 587:Jane`s Defense&Aerospace
(c) 2006 Jane`s Information Group. All rts. reserv.

10932016 Word Count:3634
Green issues loom larger in future
JANE'S NAVY INTERNATIONAL (JNI) October 15, 2004 v.109 no. 009
Section Heading: SPECIAL REPORTS
By: Joris Janssen Lok

...material sensor panels on the outside, backed by a reflector plate and a rubber-type **bending** wave **absorber** to eliminate the **vibrations** from the steel structure (constructed from damping material for the steel structure belonging to the...

10/3,K/1 (Item 1 from file: 88)
DIALOG(R)File 88:Gale Group Business A.R.T.S.
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06301613 SUPPLIER NUMBER: 94130496
Thin-film piezoelectric DSA for HDD.(hard disk drives) (Abstract)
Kuwajima, Hideki ; Matsuoka, Kaoru
IEEE Transactions on Magnetics, 38, 5, 2186(3)
Sept, 2002
DOCUMENT TYPE: Abstract ISSN: 0018-9464 LANGUAGE: English
RECORD TYPE: Abstract

Kuwajima, Hideki ...

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